Climate Change and Covid-19: Testing for Motivated Reasoning

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Pre-Analysis Plan

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1 Introduction

The world currently faces two dominant challenges, namely climate change and the Covid-19 pandemic, which share a wide range of similarities (Klenert et al., 2020). First, and most importantly, both represent devastating global problems that require rapid government intervention. Second, for a socially optimal outcome, in both crises people need to cooperate, although this may entail individual costs. Third, while these costs are salient and borne by all cooperators, benefits are rather uncertain and individual cooperative behavior may even not benefit oneself.

Despite these similarities between the two crises, climate change and the Covid-19 pandemic differ in their psychological distance. According to Liberman et al. (2007,

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p. 353), psychological distance means that "things (objects, events) [. . .] are not present in the direct experience of reality", and this distance can be of temporal, spatial, social, and hypothetical character (see Spence et al., 2012 and Wang et al., 2019 for applications of psychological distance on climate change). It is evident that the pandemic is of rather low psychological distance, as one can directly observe the consequences (hypothetical distance) immediately (temporal distance) in the neighborhood (spatial distance), and among peers (social distance). In contrast, despite climate change is already happening, there are still large uncertainties about the consequences that will mostly occur in the future. Furthermore, many people perceive climate change to mainly affect other regions and people that are different from themselves (Milfont, 2010).

In addition, concerning both challenges, there is a wide divide in public beliefs. While some people are aware of the devastating consequences of climate change and the Covid-19 pandemic, others are rather skeptical about these consequences or even about the existence of the phenomena. Regarding climate change denial, there is a large literature that analyzes its determinants (see Hornsey et al., 2016, for a review), and one crucial determinant is political identification. For instance, McCright and Dunlap (2011) show that there exist partisan differences in the attitudes toward climate change as conservatives are more skeptical toward climate change than liberals. Similarly, Gadarian et al. (2021) detect partisan differences across a wide range of health behaviors and policy preferences related to the Covid-19 pandemic.

One explanation for this divide is directional motivated reasoning, i.e., the tendency of individuals to reject information because it counters their standing belief (Druckman and McGrath, 2019). Put differently, individuals are more likely to believe information that coincides with their prior views (Kunda, 1990). One challenge identified by Druckman and McGrath (2019) is that directional motivated reasoning is hard to disentangle from accuracy-motivated reasoning, i.e. striving for truth.

In this study, we shed light on the role of motivated reasoning in the context of climate change as well as the Covid-19 pandemic and try to disentangle the two types of

motivated reasoning specified by Druckman and McGrath (2019). To this end, we conduct a large-scale survey among roughly 6,000 individuals in Germany. In the survey, we elicit a wide range of personality traits and attitudes toward climate change and the Covid-19 pandemic that allow us to determine the participants' prior beliefs and distinguish between 'deniers' and 'believers'. Additionally, we confront participants with selected online articles that contain either real news or fake news. Our main outcome of interest is whether the participants believe or disbelieve the news presented. We hypothesize that participants are subject to directional motivated reasoning, i.e., respondents are more likely to believe news, fake or real, on climate change and Covid-19 that are in line with their prior beliefs compared to news that contradict their beliefs, and they are more likely to reject news that contradict their prior beliefs compared to news that are in line with these beliefs. To disentangle directional motivated reasoning and accuracy-motivated reasoning, we implement a treatment in the survey that is designed to encourage accuracy seeking.

In particular, we aim at answering the following research questions: (1) First, to what extent are people directionally and accuracy-motivated? Second, using the psychological characteristics of the need to evaluate, preference for being right, and preference for consistency, as well as our treatment, we ask: Does accuracy seeking lead to less polarization than directional motivated reasoning in terms of (2a) a lower divergence in opinions and (2b) a lower likelihood in believing confirmatory and rejecting contradicting information? (3) Third, we investigate whether motivated reasoning is more prevalent when it comes to climate change or to the Covid-19 pandemic.

These questions are of utmost importance as the divide in the society regarding the severity of global challenges might lead to policies that are less stringent than needed. Particularly, it might be that policymakers implement carbon prices that are too low as they fear protests (Carattini et al., 2019). Analogously, policymakers might refrain from implementing incisive restrictions to combat a global pandemic or just act too late. Therefore, it is crucial to analyze whether accuracy seeking can help to decrease polarization and to understand the differences between accuracy-seeking and direc-

tionally motivated individuals. This would allow policy-makers to identify potential intervention spaces.

2 Theoretical underpinning and related literature

According to Bénabou (2015, p. 666) "people [...] have persistently *divergent* perceptions of the world they jointly observe". This divergence can be the result of biased beliefs, but it may also be due to motivated reasoning. While biases result from intuitive, automatic thinking and the lack of statistical literacy, motivated reasoning is goal-oriented and guided by emotions (Bénabou, 2015). To achieve the respective goal, people might engage in information avoidance, selective recall, and reality denial (Druckman and McGrath, 2019; Bénabou, 2015). Druckman and McGrath (2019) argue that there are two types of motivated reasoning that differ in their motivation: directional motivated and accuracy-motivated reasoning. While directionally motivated individuals aim at maintaining their prior beliefs, accuracy-motivated individuals aim at finding the truth. The former type of reasoning, thus, leads to a "predetermined conclusion", whereas the latter type is also goal-driven (accurately processing information and coming to an unbiased conclusion), but in contrast to directional motivated reasoning it "allows learning to occur".

According to Druckman and McGrath (2019), accuracy-motivated individuals attempt to evaluate information independently from their prior beliefs concerning the respective subject. Yet, different levels of trust in scientists or information sources as well as the inability to detect false information may lead to divergent perceptions of the world. In contrast, people who engage in directional motivated reasoning aim at maintaining their prior beliefs, or at feeling or performing better. To achieve this goal, they avoid information that is inconsistent with their beliefs and instead search for confirming information, rationalize away evidence that is not in line with their beliefs, give higher weight to consistent information, or try to signal to themselves that their belief is true by behaving respectively (Druckman and McGrath, 2019; Bén-

abou, 2015). Based on Festinger (1962)'s Theory of Cognitive Dissonance, one can also argue that directional motivated reasoning represents a form of coping with, or avoiding, the unpleasant feeling of cognitive dissonance (Taddicken and Wolff, 2020; Pasek, 2018), which arises when a person holds two conflicting cognitions (Festinger, 1962). Taddicken and Wolff (2020) show that individuals engage in directional motivated reasoning strategies, like searching for belief-confirming information when they are confronted with disinformation contradicting their prior beliefs, and feel relieved once they can dissolve the cognitive dissonance.

Despite pursuing different goals, accuracy- and directional motivated reasoning can lead to the same outcome. Druckman and McGrath (2019) argue that individuals who seek out information that are in line with their beliefs may do so because they aim at maintaining their beliefs, or because they consider the information source credible. Therefore, it is difficult to distinguish between these two types of motivated reasoning, a problem that the authors call "the observational equivalence problem".

Motivated reasoning may be a reason for believing fake news. For example, Hornsey (2020) investigate reasons for rejecting science, which may be closely related to believing fake news. They argue that divergence from one's ideologies, fears, and inconsistency with one's identity as well as with group identity can lead people to reject science-based information. Similarly, Pasek (2018) shows that, while there are some people who are not able to identify a scientific consensus, there are also those who are aware of the scientific consensus but still maintain contradictory beliefs.

Harper and Baguley (2019) detect that people are more likely to believe fake news about former presidents Barack Obama and Donald Trump that are in line with their political views and more likely to doubt real news that are not in line with their political orientation. Similarly, Allcott and Gentzkow (2017) find both Republicans and Democrats being more likely to believe fake news about Donald Trump and Hillary Clinton when the news are consistent with their ideology.

In the context of climate change, Lutzke et al. (2019) find that people who are more conservative are more likely to believe fake news and distrust real news about climate

change on Facebook. Thaler (2019)'s results, as well, show that there is politically-motivated reasoning regarding the belief in fake news about climate change. All this evidence suggests that one reason why people believe fake news (or do not believe real news) is because they better fit (do not fit) their attitudes and prior beliefs.

According to Construal Level Theory (Trope and Liberman, 2010, p. 24), the type of attitudes people rely on when making choices can change with the psychological distance of an event:

"The choices people make for psychologically distant situations are guided by their general attitudes, core values, and ideologies. As people get psychologically closer to the situation, their choices are increasingly influenced by more specific attitudes, secondary values, and incidental social influences. It seems, then, that from a distant perspective, global concerns are prioritized and unequivocally pursued, whereas from a proximal perspective, those priorities are weakened and even reversed as local concerns become more prominent".

This suggests that with changing psychological distance the goal people pursue when engaging in motivated reasoning can change. This, in turn, may affect which news people believe. Chu and Yang (2018) argue in a similar way when they discuss their finding that lower psychological distance can reduce ideological polarization in the context of climate change. Referring to Trope and Liberman (2010) they argue that psychological distance can affect motivated reasoning because perceived distance may influence "the accessibility of memories and cues a person needs to construct a justifiable conclusion" (Chu and Yang, 2018, p. 79).

3 Sample and setup

Data for our survey experiment is collected by forsa, a survey institute maintaining a panel of more than 100,000 individuals who are representative of the German-speaking population in Germany aged 14 and above. The panel is recruited offline, such that each individual has the same selection probability and voluntary participation in the panel is impossible.

The survey is part of a longitudinal research project that started out in 2012 and gathers plenty of information on the individual mitigation and adaptation behavior with respect to climate change. As both these actions require detailed knowledge of the dwelling characteristics and involve financial decisions, the survey addresses the household head of the randomly selected household. We will recruit a sample of 6,000 household heads from this panel and collect data on socioeconomic and demographic characteristics as well as on attitudes and preferences towards different kinds of topical issues. The data will be collected using a state-of-the-art tool that allows panelists to fill out the questionnaire online. The questionnaires are retrieved and returned from home or from mobile devices connected to the internet and the survey can be interrupted at any time. The survey will begin on January 13, 2022, and we expect to receive the collected data by the end of February 2022.

4 Experimental design

Our primary analysis aims at exploring how participants respond to real and fake news on climate change and Covid-19. In particular, we analyze the differential reactions to these news of respondents with a varying degree of skepticism toward climate change or the Covid-19 pandemic. To this end, we design an experiment that randomly confronts participants with four randomly selected online articles on climate change and Covid-19 and embed it in our questionnaire (see the Appendix for the articles we use in the experiment). The experimental setup is similar to (Harper and Baguley, 2019) as well as to Allcott and Gentzkow (2017) who analyze whether liberal and conservative partisans succumb to motivated reasoning.

Prior to the experiment, we elicit several attitudes and beliefs regarding climate change and Covid-19 as well as the psychological distance of these phenomena. To capture psychological distance, we borrow the scale from Spence et al. (2012) that addresses climate change. We mainly use the original items of this scale and translate them into German. However, since the experiment is part of a panel survey, we mod-

ify some of these items such that they are consistent with questions in previous waves (see Table 1 for all items of our scale for psychological distance). As there is no established scale to measure psychological distance related to Covid-19, and to keep the analysis for Covid-19 as close as possible to that of climate change, we elicit psychological distance to Covid-19 based on a largely similar scale.

We use the subscale of hypothetical distance to divide participants into believers (low hypothetical distance) and deniers (high hypothetical distance) of climate change and Covid-19, respectively. The resulting variable helps us to analyze whether subjects only believe news that are in line with their prior views, that is, whether believers only believe news that confirm the existence and the gravity of the consequences of climate change or Covid-19, respectively, while deniers only believe news that deny the existence or understate the consequences of the two phenomena.

Furthermore, to distinguish between directionally motivated and accuracy-seeking individuals, we elicit several psychological scales established in the literature. At the end of the questionnaire, we ask participants about their socioeconomic characteristics, which help us to further characterize directionally and accuracy-motivated individuals.

In the experimental part of our study, for each of the two topics of climate change and the Covid-19 pandemic, each participant sees two randomly selected online articles, i.e. four articles in total (see Figure 1 for a graphical representation of the experimental design). These articles are selected from a pool of six articles on climate change and five articles on Covid-19. We show the participants screenshots of the original news release and provide the link to the respective website. Afterwards, we will ask several questions on the credibility of the articles presented.

The articles vary in two dimensions: First, we employ both real news and fake news. Second, we choose real news that either confirm the believers' opinions or are in line with the deniers' views. Fake news all deviate from the truth in the way that they understate the consequences of climate change and the Covid-19 pandemic and are, thus, in line with the deniers' opinions. We randomize the articles such that each

Table 1: Psychological distance

Dimension of psychological distance	Questions	Response Options
Hypothetical distance	From your point of view, who is responsible for climate change?	3-point scale: 1. Natural processes are primarily responsible. 2. Human beings are primarily responsible. 3. Natural processes and human beings are responsible.
	I am uncertain that climate change is really happening.	5-point scale: Strongly agree - Strongly disagree
	The seriousness of climate change is exaggerated.	5-point scale: Strongly agree - Strongly disagree
	Most scientists agree that humans are causing climate change.	5-point scale: Strongly agree - Strongly disagree
	It is uncertain what the effects of climate change will be.	5-point scale: Strongly agree - Strongly disagree
Geographical distance	My local area is likely to be affected by climate change.	5-point scale: Strongly agree - Strongly disagree
	Climate change will mostly affect areas that are far away from here.	5-point scale: Strongly agree - Strongly disagree
Social distance	Climate change will mostly affect the global south ("developing countries").	5-point scale: Strongly agree - Strongly disagree
	Climate change is likely to have a big impact on people like me.	5-point scale: Strongly agree - Strongly disagree
Temporal distance	When, if ever, will we start to experience the consequences of climate change in Germany?	7-point scale: 1. We are already experiencing the consequences. 2. We will start to experience the consequences within the next 10 years. 3. We will only start to experience the consequences in 10 to 25 years. 4. We will only start to experience the consequences in 25 to 50 years. 5. We will only start to experience the consequences in 50 to 100 years. 6. We will only start to experience the consequences in more than 100 years. 7. There will be no consequences.

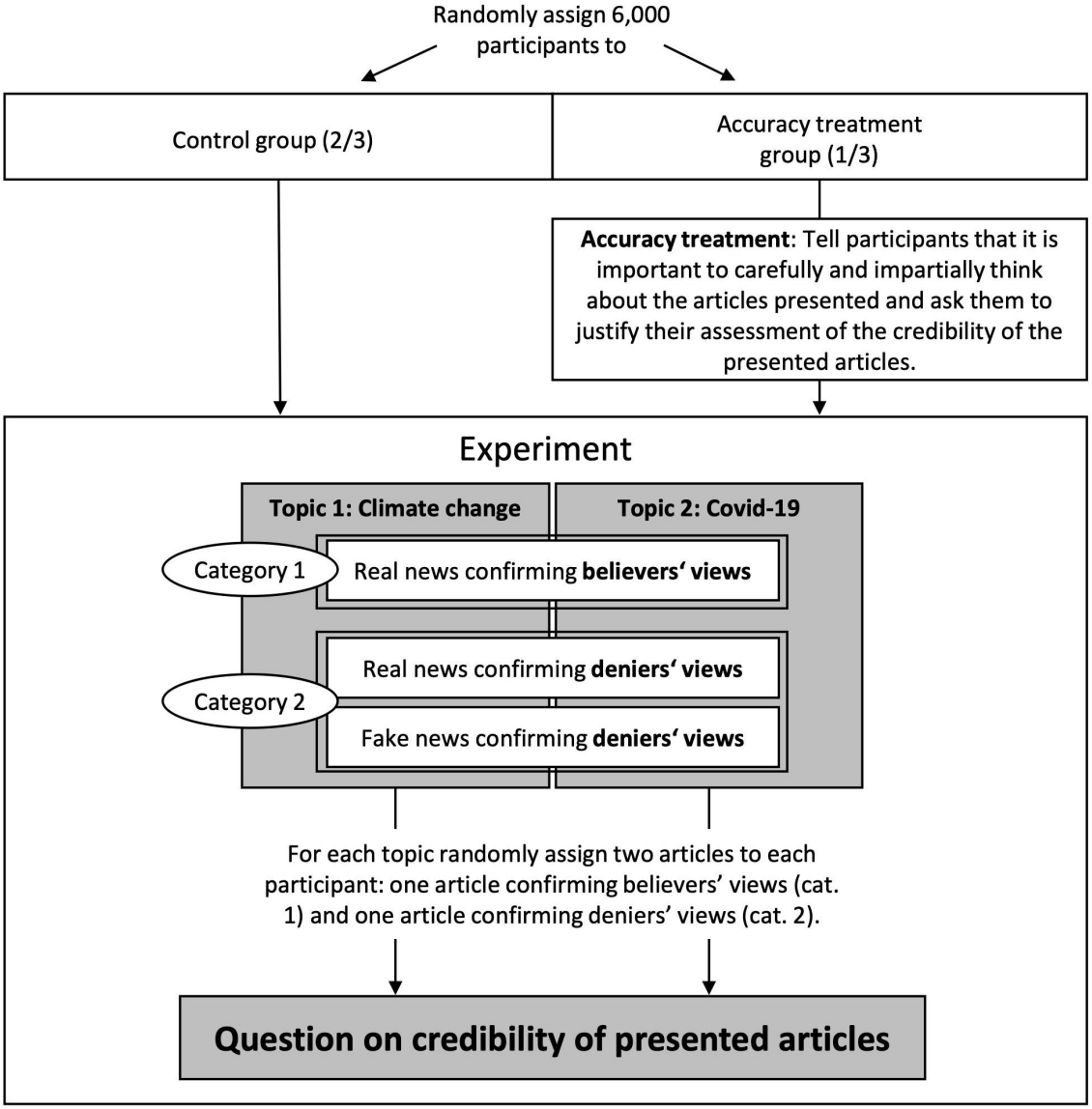
Note: The first items on hypothetical distance as well as the item on temporal distance are our own questions. All other items are borrowed from Spence et al. (2012, p. 970). We slightly modified the first item on social distance by adding the term "global south".

respondent receives one article supporting the opinion of believers and one article supporting the opinion of deniers for each of the two topics of climate change and Covid-19.

Additionally, one third of the respondents receives a treatment that is designed to increase their motivation to accurately assess the online articles presented in the experimental part. Specifically, we tell these participants that it is important to carefully and impartially think about the articles presented, and ask them to justify their assessment of the credibility of the presented articles. This allows us to analyze whether increased accuracy motivation leads to less polarization compared to directional motivated reasoning.

At a later stage of the questionnaire, we present a corrected version of the fake news that a respondent was shown in the experimental part. This is not part of our experiment, but we want to make sure that participants are aware of these news being fake news.

Figure 1: Experimental Design



5 Hypotheses

Our main outcome is whether respondents believe the news they face in the experiment. Based on the theory of motivated reasoning (Kunda, 1990), we first hypothesize that

Hypothesis 1: Respondents are more likely to believe news, fake or real, on climate change or Covid-19 that are in line with their prior beliefs compared to news that contradict their beliefs.

Second, with our setup we aim at disentangling the strive for accuracy- from directional motivated reasoning. To this end, we use psychological scales, such as the need to evaluate (Jarvis and Petty, 1996), the preference for consistency (Cialdini et al., 1995) and the preference for being right. We assume that individuals are more likely to be directionally motivated the more pronounced these characteristics are. Therefore, we categorize individuals into accuracy seekers and directionally motivated individuals based on these scales.

We then aim at answering research questions (2a) and (2b), which seek to analyze whether there is a difference in polarization between accuracy seekers and directionally motivated individuals. Since accuracy-seeking individuals try to evaluate information independently from their belief in question, we hypothesize that

Hypothesis 2a: The divergence of opinions is larger in the group of directionally motivated individuals compared to accuracy seekers.

To test this hypothesis, we use the two groups that we disentangled based on the psychological scales. We then look at the differences in participants' opinions regarding climate change and Covid-19 that we elicited before the experiment.

With respect to research question (2b) we hypothesize that

Hypothesis 2b: Compared to directional motivated reasoning, accuracy seeking decreases the likelihood to believe news that are in line with one's prior beliefs and reject news that contradict one's prior beliefs.

For this hypothesis, we use the subset of accuracy-treated individuals and compare the likelihood of believing and rejecting belief-consistent and -contradicting news be-

tween the accuracy treatment group and the remaining untreated participants (control group).

Third, based on Construal Level Theory (Trope and Liberman, 2010) we expect that psychological distance affects directional motivated reasoning. As we argue that climate change and Covid-19 differ in their hypothetical distance, we hypothesize that

Hypothesis 3: The likelihood-ratio of believing news that are in line with one's prior views and news that contradict one's views differs between the topics of climate change and Covid-19.

In general, with our setup, we aim to assess the degree of motivated reasoning for both climate change and the Covid-19 pandemic. Moreover, we intend to detect the determinants of motivated reasoning using the large suite of socioeconomic and attitudinal variables that we elicit in the survey.

6 Power analyis

To analyze *hypothesis 2b*, we randomize participants into a treatment group and a control group. Therefore, we can estimate the effect of accuracy seeking on polarization. To get an idea of the minimum effect we can detect with our data, we do a power analysis.

Our outcome in the analysis of *hypothesis 2b* is whether respondents consider the article they see on the screen credible or not, which we measure on a binary scale. Specifically, we conduct two analyses where the outcome of analysis 1 is the likelihood that subjects believe an article that is in line with their views, and the outcome of analysis 2 is the likelihood that subjects believe an article that contradicts their prior views. Our level of observation is the participant-article-level, but randomization into treatment (accuracy seeking) and control group takes place on the participant level. Therefore, for our power analysis we use the command *power twoproportions* for a two-sided test in Stata Version 16.1 and account for the clustered data structure by applying the *cluster* option, which results in Stata using the following formula based on the

Pearson's χ^2 test:

$$\pi = \Phi\left\{\frac{(p_2 - p_1) - z_{1-\frac{\alpha}{2}}\sigma_p}{\sigma_D}\right\} + \Phi\left\{\frac{-(p_2 - p_1) - z_{1-\frac{\alpha}{2}}\sigma_p}{\sigma_D}\right\}, \tag{1}$$

where π is the power, $\Phi\{\}$ is the cumulative distribution function of the standard normal distribution, and p_1 and p_2 are the success probabilities in the control and treatment groups, respectively. In our context, these are the probabilities that participants believe an article that is in line with their views (analysis 1), and the probabilities that participants do not believe an article that contradicts their views (analysis 2), respectively. $(p_2 - p_1)$ is the effect size and $z_{1-\frac{\alpha}{2}}$ is the $(1-\alpha)$th quantile of the standard normal distribution. σ_D and σ_p are the standard deviations for the difference between proportions and the pooled standard deviation, respectively:

$$\sigma_D = \sqrt{\frac{p_1(1-p_1)DE_1}{n_1} + \frac{p_2(1-p_2)DE_2}{n_2}} \tag{2}$$

$$\sigma_p = \sqrt{\overline{p}(1-\overline{p})\left(\frac{DE_1}{n_1} + \frac{DE_2}{n_2}\right)}. \tag{3}$$

DE_1 and DE_2 are the design effects in the control and treatment groups with

$$DE_1 = 1 + \rho(M_1 - 1) \tag{4}$$

and

$$DE_2 = 1 + \rho(M_2 - 1), \tag{5}$$

which depend on the intraclass correlation, ρ, and on the cluster sizes M_1 and M_2, i.e., the number of articles we show to each participant of the control and experimental group, respectively. $\overline{p}$ is the pooled proportion of participants in the control and treatment groups who believe an article that is in line with their views (analysis 1) or an

article that contradicts their views (analysis 2), respectively. It is defined as

$$\overline{p} = \frac{n_1 p_1 / DE_1 + n_2 p_2 / DE_2}{n_1 / DE_1 + n_2 / DE_2}. \tag{6}$$

As the parameters are the same for both analyses, we only do one power analysis. We follow the convention in economics and stipulate statistical significance at the 5% level, i.e., $z_{1-\frac{\alpha}{2}} = z_{0.975} = 1.96$ and a power of $\pi = 80\%$. Based on 6,000 respondents of which 4,000 form the control group ($n_1 = 4,000$) and 2,000 form the treatment group ($n_2 = 2,000$), and a cluster size of 4 in both groups ($M_1 = M_2 = 4$) we estimate the minimum detectable effect (MDE) for different values of intracluster correlation ($\rho = 0.5$, $\rho = 0.6$, $\rho = 0.7$) and different proportions of individuals in the control group who believe articles that are in line with their prior views (analysis 1) and articles that contradict their prior views (analysis 2) ($p_1 = 0.5$, $p_1 = 0.6$, $p_1 = 0.7$, $p_1 = 0.8$, $p_1 = 0.9$, $p_1 = 0.95$). The following table provides the MDE for different assumptions regarding ρ and p_1. The absolute value of the MDE ranges between 0.013 for $p_1 = 0.95$ and $\rho = 0.5$ and 0.034 for $p_1 = 0.5$ and $\rho = 0.7$.

Table 2: Minimum detectable effect (absolute values)

	$p_1 = 0.5$	$p_1 = 0.6$	$p_1 = 0.7$	$p_1 = 0.8$	$p_1 = 0.9$	$p_1 = 0.95$
$\rho = 0.5$	0.03031	0.02954	0.02746	0.02378	0.01756	0.01251
$\rho = 0.6$	0.03208	0.03125	0.02904	0.02513	0.01854	0.01320
$\rho = 0.7$	0.03375	0.03287	0.03054	0.02641	0.01947	0.01385

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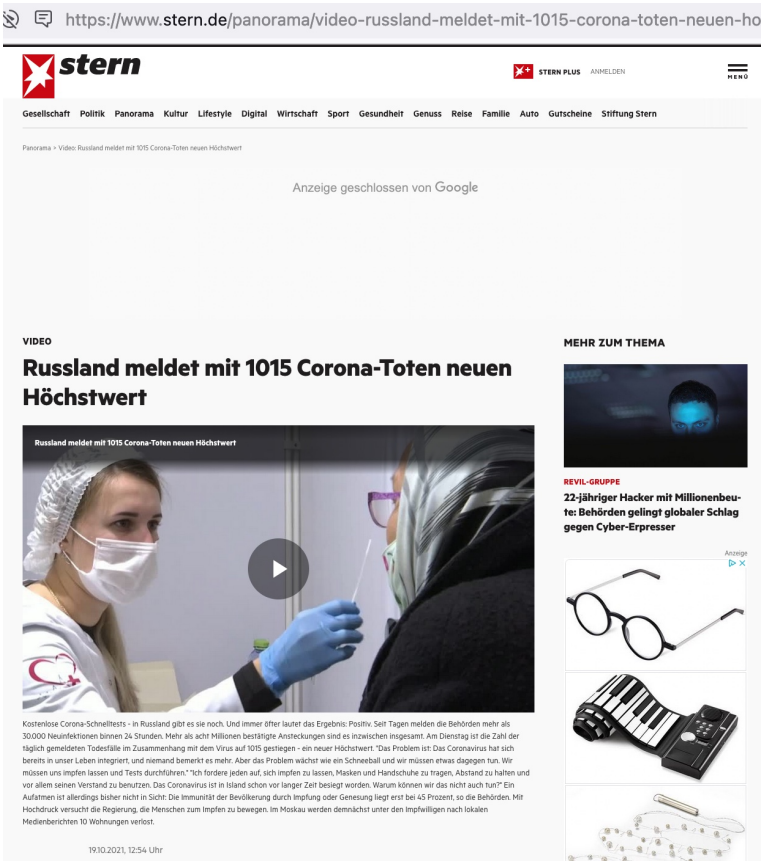
Appendices

A Online articles

A.1 Covid-19

Figure A.1: Covid-19: Real News for Believers 1



Website: click **here**

English translation:

Russia reports new peak with 1015 coronavirus deaths

Figure A.2: Covid-19: Real News for Believers 2

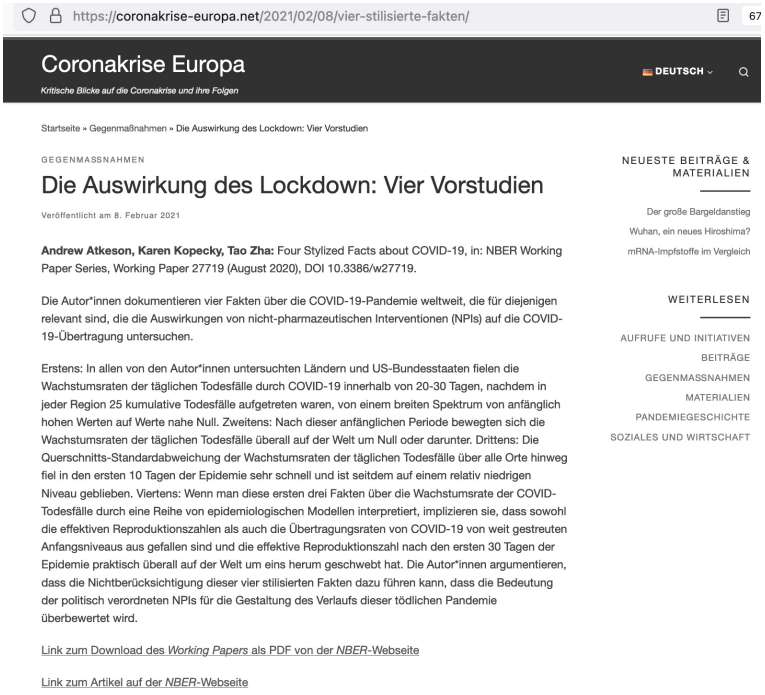
Website: click **here**

English translation:

Virologists assume further virus variants

Experts expect that the coronavirus will continue to evolve. How dangerous are future mutants for humans?

Figure A.3: Covid-19: Real News for Deniers 1



Website: click **here**

English translation:

The effect of the lockdown: Four preliminary studies

The authors document four facts about the COVID-19 pandemic worldwide that are relevant to those studying the impact of non-pharmaceutical interventions (NPIs) on COVID-19 transmission.

[...] The authors argue that failure to consider these four stylized facts may lead to an overstatement of the importance of politically imposed NPIs in shaping the course of this deadly pandemic.

Figure A.4: Covid-19: Fake News for Deniers 1

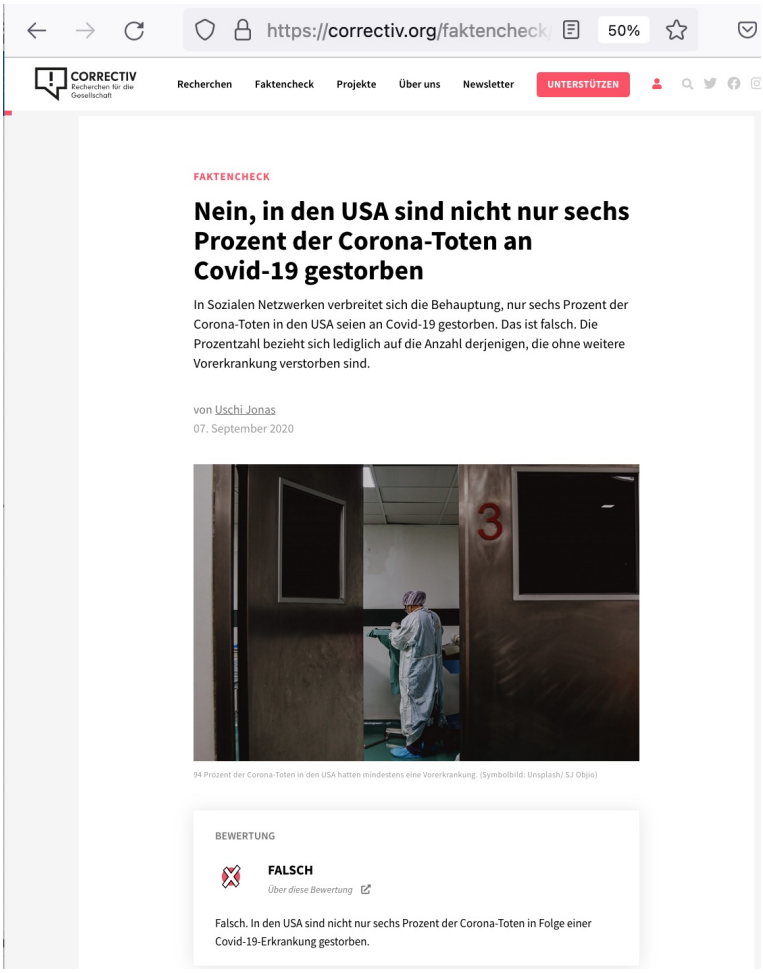
Website: click **here**

English translation:

94% of coronavirus deaths did not die from it

Over the weekend, the American Center for Disease Control (CDC) published a report on coronavirus deaths that should hit like a bomb. Of the approximately 153,504 "COVID deaths" in the USA, less than ten thousand died of COVID, it says, 9,210 to be exact. I.e. only 6 percent. The remainder-94 percent-had an average of 2.6 serious additional illnesses (likely to result in death), with extremely advanced age added to most cases.

Figure A.5: Covid-19: Fake News for Deniers 1 - Fact-Checking



Website: click **here**

English translation:

No, in the US, not only six percent of coronavirus deaths died from COVID-19

Claims are spreading on social media that only six percent of coronavirus deaths in the US have died from COVID-19. This is false. The percentage figure refers only to the number of those who died without any other pre-existing condition.

Figure A.6: Covid-19: Fake News for Deniers 2

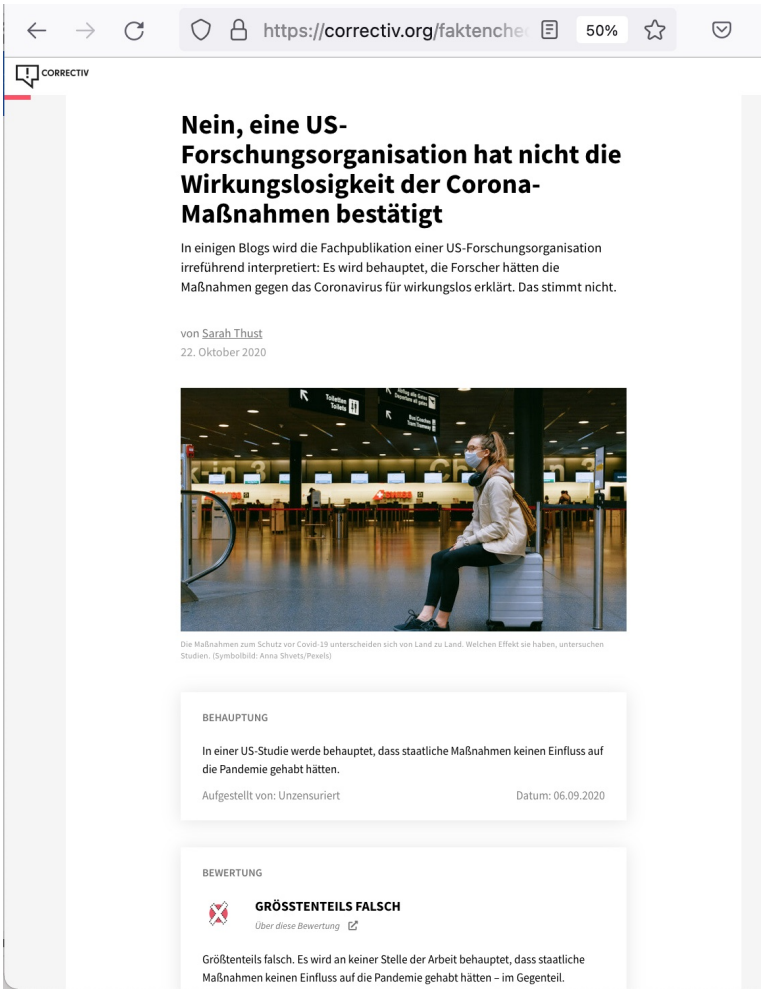
Website: **here**

English translation:

COVID-19 metastudy: lockdown and mandatory mask-wearing have no effect on progression

A recent meta-study by the prestigious National Bureau of Economic Research (NBER), founded in 1920, shows that interventions such as lockdowns and mandatory mask-wearing had no effect on the course of Covid-19.

Figure A.7: Covid-19: Fake News for Deniers 2 - Fact-Checking



Website: click **here**

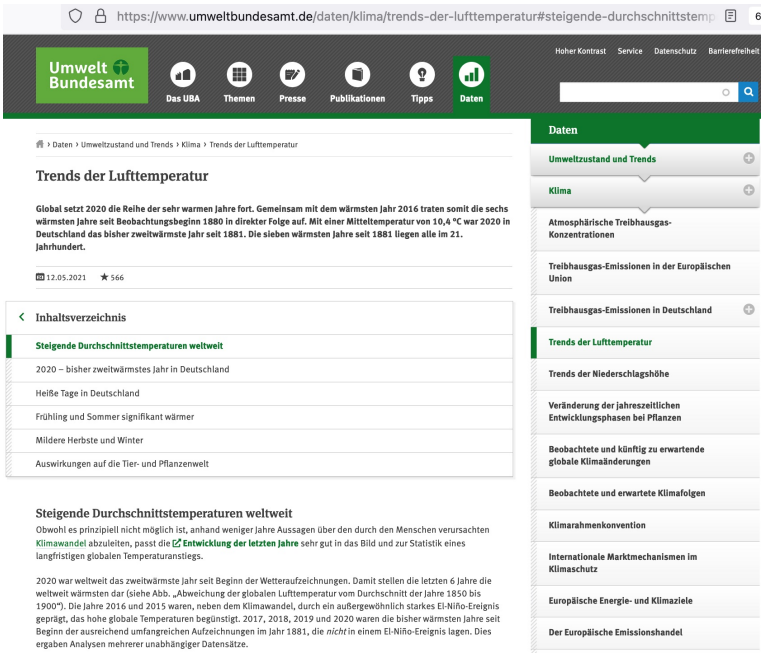
English translation:

No, a US research organization has not confirmed the ineffectiveness of the Corona measures

Some blogs misleadingly interpret the specialist publication of a US research organization: It is claimed that the researchers have declared the measures against the coronavirus ineffective. This is not true.

A.2 Climate Change

Figure A.8: Climate Change: Real News for Believers 1



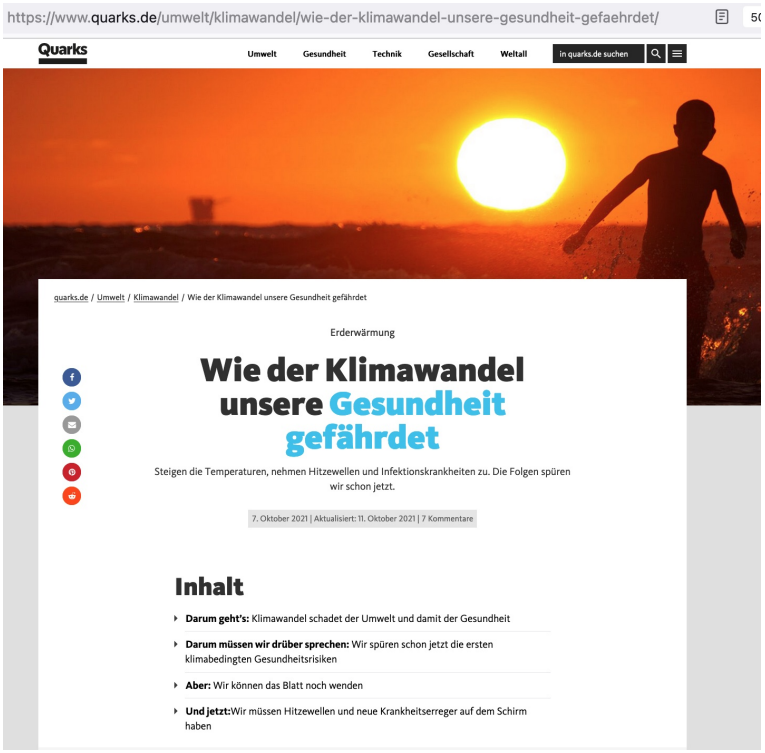
Website: click **here**

English translation:

Air temperature trends

Globally, 2020 continues the series of very warm years. Together with the warmest year in 2016, the six warmest years since observations began in 1880 thus occurred in direct succession. With a mean temperature of 10.4°C, 2020 was the second warmest year to date in Germany since 1881. The seven warmest years since 1881 are all in the 21st century.

Figure A.9: Climate Change: Real News for Believers 2



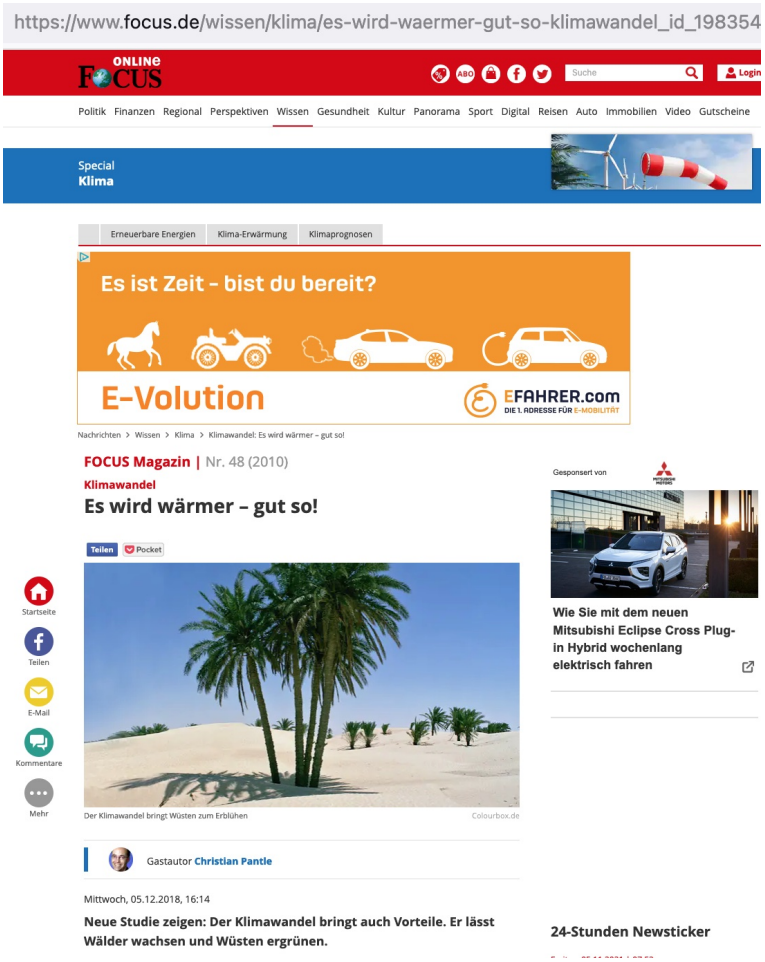
Website: click **here**

English translation:

How climate change threatens our health

When temperatures rise, heat waves and infectious diseases increase. We are already feeling the consequences.

Figure A.10: Climate Change: Real News for Deniers 1



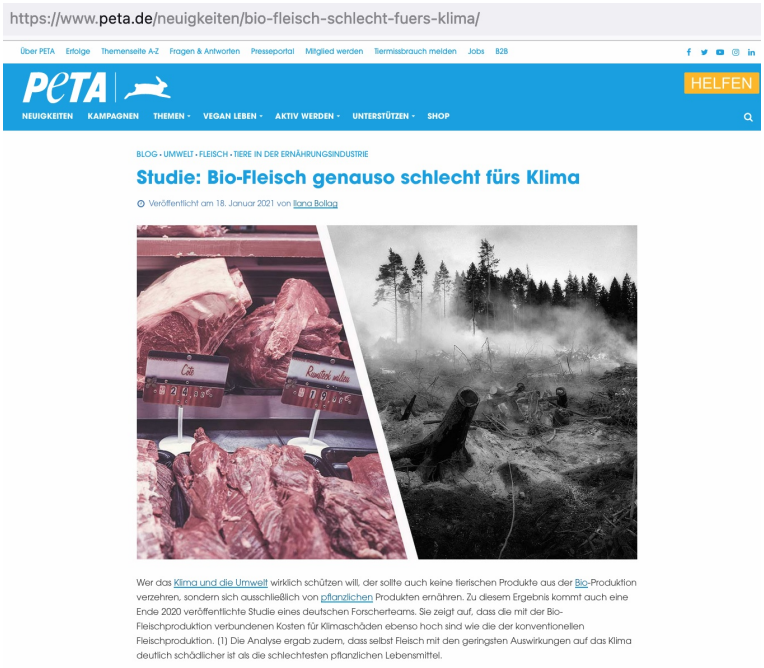
Website: click **here**

English translation:

It's getting warmer - that's good!

New study show: Climate change also brings benefits. It is causing forests to grow and deserts to green up.

Figure A.11: Climate Change: Real News for Deniers 2



Website: click **here**

English translation:

Study: Organic meat just as bad for the climate

Figure A.12: Climate Change: Fake News for Deniers 1

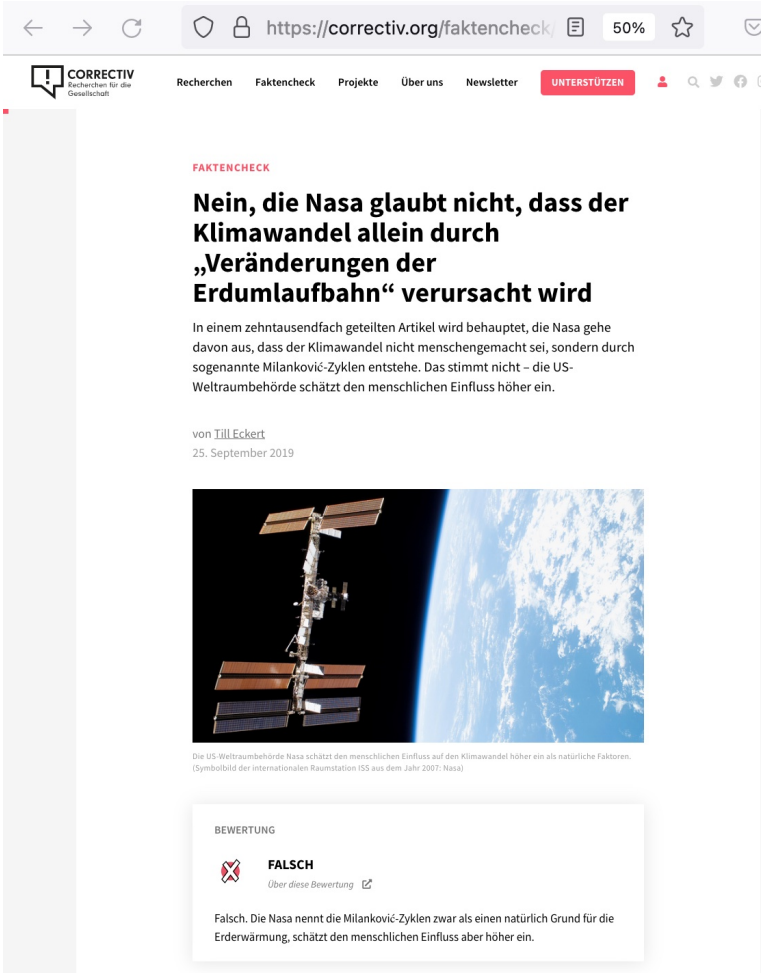
Website: click **here**

English translation:

NASA: "CLIMATE CHANGE" IS CAUSED BY CHANGES IN THE EARTH'S ORBIT AROUND THE SUN AND CHANGES IN AXIAL TILT

Climate change is a natural occurrence and is not caused by humans

Figure A.13: Climate Change: Fake News for Deniers 1 - Fact-Checking



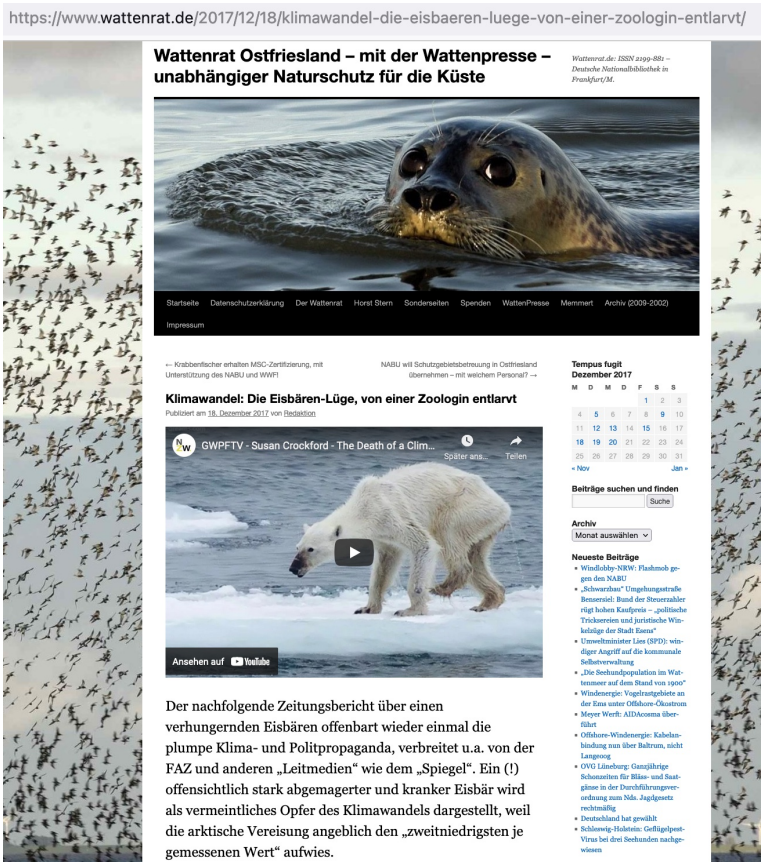
Website: click **here**

English translation:

No, Nasa does not believe that climate change is caused by "changes in the Earth's orbit" alone

In an article shared tens of thousands of times, it is claimed that Nasa believes that climate change is not man-made, but is caused by so-called Milankovic cycles. This is not true - the US space agency estimates the human influence to be higher.

Figure A.14: Climate Change: Fake News for Deniers 2



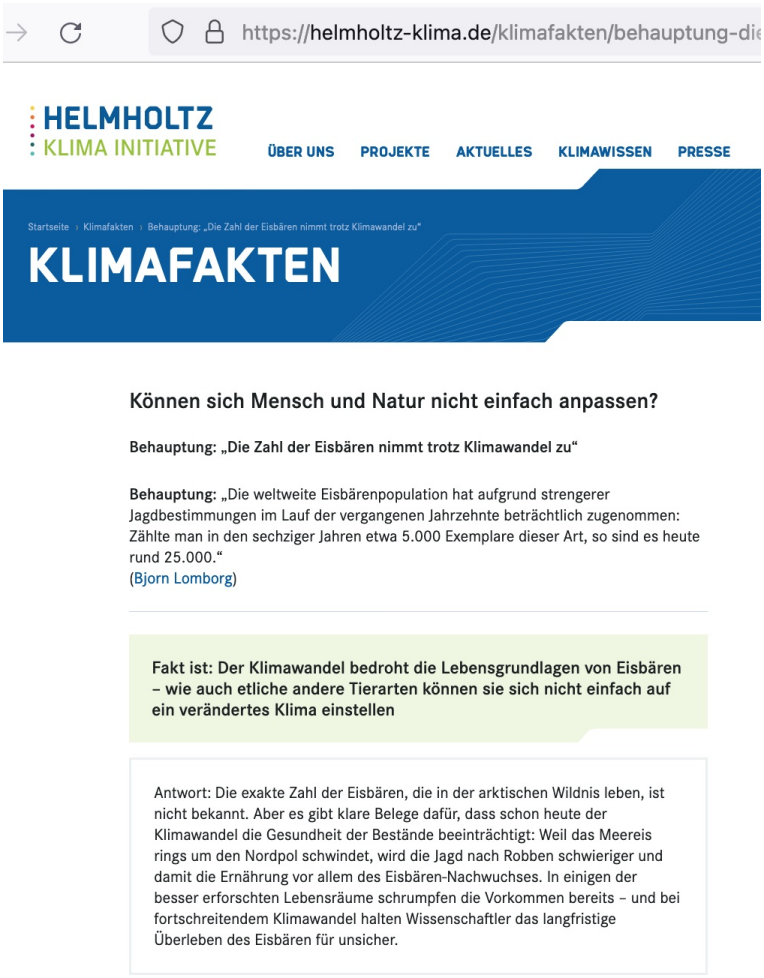
Website: click **here**

English translation:

Climate change: the polar bear lie, debunked by a zoologist

The following newspaper report about a starving polar bear reveals once again the clumsy climate and political propaganda, spread among others by the FAZ and other "leading media" like the "Spiegel". An (!) obviously very emaciated and sick polar bear is presented as a supposed victim of climate change, because the Arctic glaciation allegedly showed the "second lowest value ever measured".

Figure A.15: Climate Change: Fake News for Deniers 2 - Fact-Checking



Website: click **here**

English translation:

Can't man and nature just adapt?

The fact is that climate change threatens the livelihood of polar bears - like many other animal species, they cannot simply adapt to a changing climate.