

# Leaving the Paris Climate Agreement – Historical Setback or No Impact?

**A Comparative Framing Analysis of U.S. and German Newspaper Coverage**

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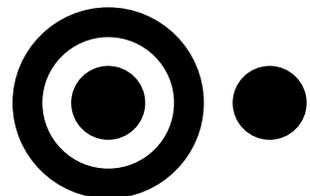
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## Abstract

Donald Trump's announcement on June 1<sup>st</sup>, 2017, to withdraw the United States from the Paris Climate Agreement generated widespread news coverage. In this qualitative framing study, a selection of articles published on that topic in the German *Frankfurter Allgemeine Zeitung* and the American *New York Times* are analyzed with respect to generic news frames, issue-specific frames, actor-statements, and images. The most frequently used news frames were *economic consequences*, *conflict*, and *responsibility*. The *morality* frame appeared only twice, whereas the *human interest* frame was not evident in the verbal text at all, but occurred in one image. Two issue-specific frames emerged, the *setback* frame, evident in the majority of articles, cast Trump's decision as a momentous setback for the U.S. and the global fight against climate change. The contradictory *no impact* frame implied that the Paris Agreement has many problems as is, and the U.S. withdrawal will have no impact on the state of the climate. The images accompanying the articles were shown to support the verbal issue-specific framing of the articles, whereas no clear relation could be found connecting certain types of actor-statements with the presence of a certain frame.

**Keywords:** framing; news frames; qualitative content analysis; comparative framing analysis; multimodal framing analysis

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# 1. Introduction

This project started from a broad interest in the field of environmental communication, particularly in how climate change is talked about in the media, whether it be print, broadcast, or digital, in the spheres of news, entertainment, science, education, or corporate communication. I was also concerned with the political struggle to act on climate change, the seeming difficulty of international decisionmakers to find common ground to build impactful agreements. The Trump administration's dismantling of climate protective legislation since the start of the term in 2017 pushed me further in that direction. Initially, I was also curious about environmental advocacy groups, and how their views and agendas would find representation in the news media.

Delving deeper into the subject, I felt the need to limit the scope of the study. Finally, I chose one international political event as the case that I wanted to investigate, namely Donald Trump's announcement to withdraw the United States from the Paris climate agreement on June 1<sup>st</sup>, 2017. The announcement had been anticipated ever since Trump had made it a campaign promise to leave the Paris deal. Nevertheless, it elicited widespread reactions in the U.S. and internationally. The news reports about the announcement also prompted stories about the Paris agreement, explaining its content, and what the effects of the U.S. withdrawing from it might be.

As I quickly discovered how wide and complicated the field is, I decided to approach it from a framing studies perspective, as this allows breaking down communicative texts to find underlying "organizing principles" (Carter 2013, p. 1) and compare these across different media outlets, countries, or times. When reviewing previous framing studies, I came across the multimodal approach to comparative media content research developed by Wozniak et al. (2014), which integrates framing, narration, and visual representation into a new research design. As this approach is focused on climate change coverage, I found that it would be useful to borrow some analytical categories from Wozniak et al.'s concept, specifically visual representation, i.e. images, and actor-statements, i.e. quotes, to add on to the framing analysis. This will allow for a more comprehensive analysis of the texts and balance the fact that the sample size is relatively small.

The object of analysis is the journalistic text in news media, but factors of media production and media effects will be acknowledged where appropriate. Specifically, I will examine articles from a selected quality news outlet, using their online versions, in the U.S. and Germany. Given

the historically different nature of the climate change debate in the two countries, which will be discussed in detail below, a comparative research design allows me to see whether these differences are still present in this case.

The research questions I will address are

RQ1: How does the news press in Germany and the U.S. report on Donald Trump withdrawing the U.S. from the Paris accord?

RQ1a: Which news framed are used?

RQ1b: Which issue-specific frames are used?

RQ2: How can the images accompanying the articles and the actor-statements in the articles be interpreted in relation to the frames?

As climate change is one of “the most important political problems of the day transcend[ing] national borders” (Robertson 2015, p. 67), it is important to research how this issue that combines political decision-making and environmental science is discussed in the public sphere. Will there be differences in how the event is framed in the two countries? We should be concerned with this question because “[t]he extent to which press coverage of global-warming issues varies from country to country may affect international agreement or disagreement on collective efforts to solve these problems” (Nacos et al. 2000, p. 41).

With the increasing globalization of the media in general, comparing media from two countries can give us indications about whether news reporting is becoming more globally aligned. Or are foreign and global issues instead becoming domesticated to retain the interest of the local audience? Can we see any indications of journalists practicing “global journalism,” as Berglez conceptualizes it, offering “a global outlook on social reality” by seeking to understand how processes and practices in environment and society, politics and economy, are globally interdependent (2008, p. 845)?

In the next chapter, I will review selected relevant literature on the topic, before giving an overview of the theoretical approach of framing. Then I will lay out the methodology and empirical data used in the study, before proceeding to the results and analysis that will then be discussed. The thesis is concluded by answering the research questions.

## 2. Theory

This chapter will introduce the main theoretical approach employed in this study, framing, and address ontological and epistemological questions.

### 2.1. Framing

Why should we be interested in studying media framing of climate change, politics, or any issue in general? The short answer is that media audiences' beliefs, opinions, and behaviors are influenced in different ways depending on the framing of the message in the media text that audiences read, listen to, or view. If we believe that frames in communication can affect frames in thought (see Scheufele 1999), we must be concerned with recognizing and evaluating how issues are framed in media. Finding out how these frames have been constructed, and by whom, could give us an understanding of the frame sponsors' intentions and anticipated outcomes. From an international comparison of frames, we hope to glean insights into media and communication preferences and cultural aspects of different societies.

The concept of a 'frame' was introduced in 1974 by sociologist Erving Goffman to denote "the cognitive maps or patterns of interpretation that people use to organize their understanding of reality" (Cox & Pezzullo 2016, p. 62). In the field of psychology, specifically behavioral economics, framing was popularized by Tversky and Kahneman (1981), who found that people make different decisions when presented with "logically equivalent but semantically different" choices (Lecheler et al. 2015, p. 814).

Framing is not only "an individual psychological process," but also "an organizational process and product, and a political strategic tool" (Entman et al. 2009, p. 175). It occurs "at four levels: in the culture; in the minds of elites and professional political communicators; in the texts of communications; and in the minds of individual citizens" (ibid., p. 176).

In media studies, "[f]rame analysis is a lively and important methodology," (Matthes 2009, p. 349), however, it is "more a research program than a unified paradigm" (ibid.). As such, multiple definitions exist. Gamson and Modigliani define framing as the "central organizing idea or story line that provides meaning to an unfolding strip of events" (1987, p.143). This definition is rather wide and does not provide a sufficient basis for measurement or theory (Entman et al. 2009, p. 175-176).

In order to follow a definition of ‘frame’ that provides “precise operational guidelines” (Matthes 2009, p. 350), I choose Entman’s (1993) definition of framing as selecting “some aspects of a perceived reality and mak[ing] them more salient in a communicating text” in order to “promote a particular problem definition, causal interpretation, moral evaluation and/or treatment recommendation” for the specific issue (p.52). An operational definition like this can be used to specify frame indicators, which is “central to frame validity,” (Matthes 2009, p. 350) which will be discussed further in the methodology section of the thesis. The functional specifications inherent in this definition help distinguish framing from mere themes, arguments, or assertions (Entman et al. 2009, p. 176). By

“repeatedly invok[ing] the same objects and traits, using identical or synonymous words and symbols in a series of similar communications that are concentrated in time,” frames “promote an interpretation of a problematic situation [...] and [...] support of a desirable response, often along with a moral judgment that provides and emotional charge” (ibid., p.177).

Frames have been conceptualized at different levels of abstraction, mainly distinguishing between issue-specific and generic types of frames (de Vreese and Matthes 2012, p. 368). The former means that every issue, topic, or event can have its specific frames. The latter identifies frames that are applicable across different themes. These can be episodic and thematic frames as identified by Iyengar (1991, cited in Entman et al. 2009, p. 176). Episodic frames construct an issue “around specific instances and individuals,” without providing a broader context, “steer[ing] attention away from public solutions (Entman et al. 2009, p. 176). On the other hand, “thematic framing emphasizes broader trends or backgrounds of issues” (ibid.).

Framing scholars usually separate the framing process into three stages. The first is frame building, which occurs at the news production-stage and can be called a frame antecedent (Matthes 2009, p. 351). The frame itself is the second step in the process, it is found in news content at the textual or visual level and will be the main focus of this study. Lastly, consequences, or framing effects, are also being studied extensively (see Blauwkamp et al. 2018; Valenzuela et al. 2017; Lecheler et al. 2015 for some recent examples), focusing on the emotional, cognitive, and behavioral changes occurring in audiences after being exposed to different frames. Matthes points to one strength of framing research as “its ability to bridge several research areas such as the production, content, and effects of news,” (2009, p. 351) therefore this study will mention frame antecedents and effects where appropriate, while the focus will remain on the news content.

Furthermore, de Vreese (2012) emphasizes the importance of distinguishing between advocacy frames and journalistic frames. Advocacy frames are frames that are “brought forward by different proponents in a political debate” (p. 367). “Journalistic framing is often more subtle” (ibid.) and consists of selecting, emphasizing, and juxtaposing advocacy frames rather than reframing the topic entirely (p. 367). Entman already introduced a distinction between substantive and procedural frames, where a substantive frame describes the “features of an issue that an actor wants to promote” (2004, cited in de Vreese 2012, p. 368), while a procedural frame focuses on “for example, political strategies” (ibid.). De Vreese finds that substantive and advocacy frames on the one hand, and procedural and journalistic frames on the other are corresponding concepts (p. 368).

Semetko and Valkenburg (2000) expand on previous framing research by “investigating the occurrences of the frames that have been discussed in the earlier literature” and elaborating on Iyengar’s earlier work on “episodic” and “thematic” news types” (p. 95). They specify five news frames: (1) *Conflict frame*, emphasizing “conflict between individuals, groups, or institutions” (Semetko & Valkenburg 2000, p. 95) often reducing “complex [...] political debate to overly simplistic conflict” (ibid.); (2) *Human interest frame*, emphasizing an “emotional angle” or bringing a “human face” to the “presentation of an event, issue, or problem,” (ibid.) serving to personalize and dramatize the news; (3) *Economic consequences frame*, highlighting the economic consequences of an event or issue for “an individual, a group, institution, region, or country” (ibid., p. 96); (4) *Morality frame*, which puts an “event, problem, or issue” in the context of “religious tenets or moral prescriptions” (ibid.). Journalists often refer to this frame indirectly, “through quotation or inference” (ibid.) because of the professional norm of objectivity prohibits direct moral messaging. The (5) *Responsibility frame*, attributes responsibility for the cause or solution of an issue or problem “to either the government or to an individual or group” (ibid.). All of these frames serve to capture and retain audience interest (ibid.). These five generic frames have been used in several subsequent framing studies (see Cozma and Kozman 2015 for one example).

Regarding the topics, the researchers separated between topics about Europe and European integration on the one hand and crime on the other hand. They found that the former were more often “framed in terms of the attribution of responsibility, conflict, and economic consequences,” (Semetko & Valkenburg 2000, p. 107) while the latter “were more often framed in terms of human

interest” (ibid.), as the stories about crime “often went into the personal details of victims and perpetrators” (ibid.).

## 2.2. Ontology and Epistemology

The underlying ontological stance of this study, i.e. the assumption about the nature of social phenomena, is that of constructionism. Following the position that social entities “should be considered social constructions built up from the perceptions and actions of social actors” rather than having an existence independent of social actors, as the objectivist position asserts (Bryman 2016, p. 28-30). There is, of course, a physical world out there, but we “understand and engage this world, infuse it with significance, and act toward it” through symbolic modes: our perceptions of the world are constructed through cultural sources (Cox and Pezzullo 2016, p. 54).

The view about how research should be conducted, the epistemological orientation, is interpretivist, meaning that the aim of social science is to “grasp the subjective meaning of social action” (Bryman 2016, p. 26), to understand human behavior rather than to explain it. People and their institutions as the objects of social science are seen as distinct from the objects of natural science and therefore a different logic is required to study them.

Following the qualitative paradigm, I will regard the role of theory in research as inductive, meaning that theory is generated through research rather than research serving to test existing theories (ibid., p. 32).

Although it is possible to use the concept of framing from a “diversity of theoretical perspectives,” (Matthes 2009, p. 349) I choose the constructionist approach in this study as I believe it is the one that best allows for an interest in the representation of social and political phenomena. The research question asks for which frames are used in the news media to report on Trump’s announcement to leave the Paris Climate Agreement, and how actor-statements and images in the media texts can be interpreted. That means we are interested in the representation of politics and climate change in the media, which is necessarily a social construction: without social actors and categories it would not exist.

### 3. Literature Review

In the following I will refer to selected academic studies on framing and discuss their relevance for my thesis.

In a quantitative content analysis of Dutch media, Semetko and Valkenburg investigated whether the use of frames varied by outlet and by topic. Analyzing news stories on politics and crime, they found that the most used frame across all outlets was the *responsibility* frame, followed by the conflict frame. Third and fourth most frequently used were the *economic consequences* and *human interest* frames, and the *morality* frame was least used (Semetko & Valkenburg 2000, p. 103). All newspapers used the responsibility frame most often, while the more sensationalist television news program used it less than the more serious programs did (ibid.). Similarly, the conflict frame was used more frequently in the serious newspapers, and less often in the sensationalist television program (ibid., p. 104). The *economic consequences* frame was used more in the sober and serious press outlets and significantly less in television news (ibid.). The *human interest* frame was used more in television news than in the press outlets, where it appeared more often in the sensationalist paper (ibid.). Finally, the *morality* frame was used least often (ibid.). We will return to the definition of the frames mentioned above in the theory chapter.

Also using a quantitative content analysis, Boykoff and Boykoff (2004) researched the coverage of global warming in the U.S. prestige-press (the *Washington Post*, the *New York Times*, the *Los Angeles Times*, and the *Wall Street Journal*) between 1988 and 2002. The authors claim that a “failed discursive translation” has taken place and contributed to a divergence of popular discourse from scientific discourse on the topic of climate change (p. 125). While the IPCC has asserted that climate change is a global problem with anthropogenic influences that requires immediate action, the prestige press has given roughly equal space to a “denial discourse,” a minority view arguing that global warming is not scientifically proven or not a serious issue and does not require action, in an attempt to adhere to the professional journalistic norm of balance (Boykoff & Boykoff 2004, p. 126). Journalists aiming for neutrality and striving to tell ‘both sides of a story’ in the news thus led to an “informational bias,” where the actual consensus in the scientific community – that immediate and mandatory action is needed to combat climate change – was not reported as such (ibid., p. 127; 134). The authors conclude that

[t]his bias, hidden behind the veil of journalistic balance, creates both discursive and real political space for the US government to shirk responsibility and delay action regarding global warming (ibid., p. 134).

Although this study did not specifically investigate frames, it is an important take-off point for research on the representation of climate change in the U.S. news media.

Shehata and Hopmann (2012) studied the framing of climate change in Swedish and U.S. newspapers over a period of 10 years. In order to investigate agenda-setting and frame-building processes in Western news media, they set out to analyze two competing claims about these processes. The first is that a globalization of information flows is taking place, and shared norms and values within professional journalism lead to similar coverage of a topic everywhere (Shehata & Hopmann 2012, p. 175). The second is that domestic political elites and political circumstances influence how global news are covered, and that the range of viewpoints expressed in the media is limited to those held by the political elite in the country, this is also called the indexing hypothesis (ibid., pp. 175; 177). The authors find that Sweden and the U.S. make for a suitable case comparison because the countries differ on consensus of the political elite regarding the scientific reality of global warming and the perceived need for action to mitigate it – there is elite consensus in Sweden, whereas the U.S. is characterized by elite conflict (ibid., p. 176).

In their content analysis of two national newspapers in each country, they define a dominant climate change frame and several counter-frames challenging it (Shehata & Hopmann 2012, p. 179). The climate change frame defines the problem (“global warming is a significant social problem” (ibid.)), interprets its causes (“caused by human activity through the emission of carbon dioxide and other so-called greenhouse gases into the atmosphere” (ibid.)) and implies the logical solution, a reduction of greenhouse gas emissions (ibid.). This frame is “embraced fully and promoted by the [Intergovernmental Panel on Climate Change] IPCC” (ibid.), but is challenged mainly by the following three counter-frames, all promoting the view that global warming is not a problem and there is no necessity for emission reductions (ibid.). These counter-frames are (1) scientific uncertainty, implying that more research is needed before any actions should be taken, (2) economic consequences, cautioning that emission reductions would harm the economy, and (3) benefit, denying the negative impacts of global warming and instead claiming that there are benefits for global health, quality of life, and agriculture, consequently no measures to combat climate change are necessary (ibid., p. 180).

Because of the latent character of frames, the researchers define two frame segments or indicators to code the news articles, so that statements about human activity as a cause of global warming and emission reduction as a way to combat it indicate the presence of the climate change frame (Shehata & Hopmann 2012, p. 182). The results show that the peaks and dips of climate change coverage are aligned in both countries, although there is more coverage overall in the U.S. (ibid., p. 184). Domestic political actors do not trigger a majority of the coverage and international factors were more important, so the indexing hypothesis does not find any support (ibid., p. 184; 188). The climate change frame dominates news coverage of global warming in both the U.S. and Sweden, while the scientific uncertainty frame is completely absent (ibid., p. 188). The most common counter-frame was the economic consequences frame, its use peaked in the American newspapers around the Kyoto conference coverage (appearing in 21.1% of the paragraphs) but then it had almost disappeared by 2007; in Sweden it declined from an already low incidence in 1997, being present in 7.4% of the paragraphs, to an incidence of just 4.3% ten years later (ibid., p. 187). This difference is the only support found for the assumption that news coverage reflects the domestic political environment (ibid., p. 188). The most important finding of this study is that “the climate change frame strongly dominates American news coverage of global warming and leaves no room for climate skeptics questioning the validity of the IPCC view – a conclusion that appears to be totally at odds with past research (ibid., p. 188), specifically Boykoff & Boykoff (2004), discussed above.

Nisbet (2010) discusses how scientific knowledge about climate change can be framed in a way to inform and mobilize the public to take action. Stating that “framing is an unavoidable reality of the public communication process” (Nisbet 2010, p.44), he questions the applicability of journalistic norms of objectivity, impartiality, and neutrality when communicating about problems like climate change that are the “ultimate ambiguous situation” for the public, with a “creeping nature” and high degree of complexity (ibid., p.47). He calls for a new brand of not-for-profit journalism to counteract developments like the fragmentation of the media and the rise of ideologically slanted news outlets (ibid., p. 51). Another problem that has hampered efficient communication about climate change so far are that frames which used to be promoted by Republican leaders and conservative think tanks, namely *scientific uncertainty* and *economic consequences*, still linger in public perception, even as some Republican leaders have called for action to mitigate global warming (ibid., p. 53).

Koteyko, Thelwall, and Nerlich (2010) introduce linguistic creative compounds around the lexical hub of “carbon” as framing devices in climate change mitigation discourses (p. 25). In a combined quantitative and qualitative analysis of online sources such as blogs, news sites, and social media, the authors use an interdisciplinary approach that combines “the analysis of issue cultures, issue networks, and media hypes [...] and the study of metaphors as tools of communication” (Koteyko et al. 2010, p. 27). Stating that compounds form an “important contextualization device” (ibid., p. 29), they focus on the repeated use of compounds as part of the collective process of framing (ibid.). Metaphorical compounds “pack a lot of semantic and conceptual information into one small lexical package” (ibid., p. 30). By connecting two domains, as, for example, “carbon trading” connects CO<sub>2</sub> reduction to financial management and “carbon diet” links CO<sub>2</sub> emission reductions to lifestyle/nutritional restraint (ibid., p. 40), metaphors “make something difficult comprehensible” (ibid., p. 47) and “allow their users to talk about carbon dioxide emissions” (ibid.) in other terms. Thus, compounds can serve as bridging metaphors to create common ground between different discourses, such as science on the one hand and lay understandings of the climate problem on the other hand (ibid., p. 28).

A finance/accounting frame can make environmental issues more visible to decision makers by highlighting “quantifiable relationships with commodities” (ibid., p. 39) and “naturalize [...] mitigation options for policy makers by mapping them onto financial options” (ibid., p. 47). A compound such as “carbon guilt” implies a moral or religious frame, highlighting restraint as a lifestyle choice and shifting the emphasis from a scientific discussion of carbon emissions “to a moral story about the need for personal limitation” (ibid., p. 40-41). Compounds constituting “a frame centered on the reorganization of life around climate change,” (ibid., p. 40) as for example “carbon footprint” and “carbon detox,” might naturalize mitigation options for ordinary people by mapping them onto everyday lifestyle choices (ibid., p. 47). Creative compounds serve as traditional framing devices by “carving out a certain conceptual space and providing a particular angle on an issue” (ibid., p. 47). The authors suggest that creative compounds could also help science communication to become less dull and less scientific as they are often “attention grabbing” and part of the common vocabulary (ibid., p. 48).

Although the next work is concerned with advocacy frame construction, there is an interesting connection to how climate change has been framed historically in the American media.

Schlichting's study (2013) examines frames as they were promoted by industry actors to question the existence of climate change and argue against environmental regulation. The author conducted a meta-analysis of industry actors' (mainly North American, European, and Australian multinational corporations (MNCs)) strategic climate change communication between 1990 and 2010. Based on content analyses of corporate publications as well as interviews with managers, she identifies three consecutive phases in communication, each characterized by a dominant master frame: *scientific uncertainty*, *socioeconomic consequences*, and *industrial leadership* (Schlichting 2013, p. 493). For each phase, she points out the main sponsors of the dominant frames (ibid., p. 498). At the time of writing, the industrial leadership frame is still the prevalent one in industry climate change communication (ibid., p. 502).

Schlichting's study also highlights the historical differences between industry-sponsored strategic framing of climate change in the US and Europe. The *scientific uncertainty* frame emerged in the US, when the fossil fuel and coal industry initiated a "debate about whether climate change was a scientific fact or an unproven theory (ibid., p. 505) in the early and mid-1990s, "encourag[ing] (pseudo) scientific uncertainties to protect their businesses from regulations (ibid.). In the next phase, starting around the time of the Kyoto Treaty negotiations, the *socioeconomic consequences* frame was pushed by the American fossil fuel, coal and automotive industry, while European MNCs pioneered the *industrial leadership* frame, within which industry actors acknowledge corporate responsibility for protecting the climate and portray technical innovations as the way to a climate-friendly society. However, the responsibility is also passed on to the consumer, and industry actors cast themselves in the role of consultants who are helping people make more sustainable choices (ibid., p. 503).

For the present study, two takeaways from Schlichting's study seem especially relevant. For one, the *scientific uncertainty* and *economic consequences* frames staying relevant for a longer period in the U.S. might have implications for how American media have interacted with industry-sponsored frames that might be lingering still today. Secondly, it might be relevant to consider whether the *industrial leadership* frame with its worldwide popularity among industrial actors (ibid., p. 502) could have an influence on news media framing of climate issues.

The influence of frames on individual behavior is a topic in numerous studies of framing effects, dealing with attitudinal, cognitive, or behavioral changes in the audience after being

exposed to media content. Although this project focuses on the frames themselves and does not include any research on audience effects, the study by Sapiains et al. discussed below underlines the importance of studying frames present in media texts concerning climate change because it compellingly demonstrates how the audience is affected by different frames.

In their 2016 experimental study, Sapiains et al. address the problems of promoting pro-environmental behaviors in people who reject anthropogenic climate change. Starting with the assertion that “what people think about climate change is more related to previous values and beliefs than to an objective analysis of the information presented by scientists or the mass media,” (Sapiains et al. 2016, p. 484) they set out to “develop models that encourage changes” that are “consistent with different types of values” (ibid.). In two focus-group experiments conducted in Australia, the researchers tested whether an identity frame (emphasizing people’s regional identity and bonds between people and places) in competition with other frames (traditional climate change communication, biodiversity conservation, and economic prosperity) increased support for climate change action. The results showed that people who rejected anthropogenic climate change tended to support pro-climate action when “the importance of the environment for their identity was highlighted and information that might be deemed controversial for this group was omitted” (ibid., p. 489). This supports previous results that traditional climate change communication – trying to convince people with scientific arguments and moral claims – is quite ineffective. A risk communication will have a bigger impact on an individual’s value-belief system if that message represents a threat to the person’s identity (ibid.). When a place has an emotional significance for a person, environmental threats can be perceived as a personal problem rather than just an external one (ibid.).

For another study investigating framing effects on audiences at the macro (contextual) and micro (individual) levels regarding attitudes on climate change, see Nisbet, Hart, Myers, and Ellithorpe (2013).

## 4. Methodology and Empirical Data

This chapter provides an explanation of the method that is used in this study and specifies how the empirical material was selected.

### 4.1. Method

The study uses a qualitative comparative design with two cases, the U.S. and Germany, represented by a selection of articles from one newspaper in each country. The framing analysis will start with a deductive analysis to find the five generic news frames as stipulated by Semetko and Valkenburg (2000), discussed above. As these frames are generic, they will be treated in a literal sense and are understood to be separate from any subtextual aspects, such as cultural symbols, and more nuanced stylistic devices such as irony or sarcasm. For each frame, the words and expressions indicating its presence are listed in the Appendix (Table 1).

As is customary in a qualitative study with a small sample, I will use the paragraph as the unit of analysis for the news frames (Entman et al. 2009, p. 180). Each frame can be counted in one paragraph just once, even if several indicators are present. A single paragraph can, however, contain more than one generic news frame.

The issue-specific frames will be inductively specified after multiple readings of the material and will be defined according to Entman's four criteria. Key expressions and sentences will be excerpted from the material to show recurring themes.

The unit of analysis for the issue-specific frames is the article, as these are mutually exclusive, so that one article can only be framed in terms of either one of the frames. It is also possible that no issue-specific frame is detected in an article.

Aiming to combine the concepts of framing, actor-statements, and visual representation in the comparative analysis of the material, I will rely on the approach laid out by Wozniak et al. (2014), who suggest a multimodal research design for a standardized content analysis of large samples of climate change coverage in print media (p. 469). Although this study has only a small sample and contains a comparison between just two countries, the approach of combining the “two *representational modes* of information, written text and visual representations,” (Wozniak et al. 2014, p. 472, italics in original) with “two *communicative modes*, framing and storytelling or narration” (ibid., italics in original) is at least partly applicable here. The authors emphasize the

importance of considering narrative elements, actors, arguments, and visual representations together in order to get closer to the complete picture, which is also closer to the readers' experience of being exposed to the different modes of information together in one journalistic piece (*ibid.*, p. 471).

An article might employ one or several of the informational modes. These do not necessarily form a cohesive whole, sometimes a separate or different story might be told in the photograph from the one told in the written text (Wozniak et al. 2014, p. 471). When analyzing climate change coverage, the frames might be similar across countries, as Shehata and Hopmann (2012) have also shown, but they rely on narratives offering “symbolic systems [...] and exemplars for identification” (Wozniak et al. 2014, p. 471) to resonate culturally with the audience.

As Brantner et al. (2011) point out, visual framing by Entman's definition is also possible (p. 525). Images “connote witnessing and increase emotional participation” and thus are often even more salient than the textual frame (Brantner et al. 2011, p. 526). For example, pictures of political figures in general often signify institutional power.

Images, as the visual mode of communication, can suggest an iconic representation as a cognitive short cut for understanding complex issues and also provide access to collective memory (Wozniak et al. 2014, p. 471). A good example is the image of a polar bear on a crumbling ice floe that has become a familiar short cut that resonates with large audiences and denotes issues of global warming, rising sea levels, and endangered wildlife habitats (Cox & Pezzullo 2016, p. 79). Such images become “condensations symbols” (*ibid.*) that “condense powerful emotions, memories, or anxieties” into one symbol, that could be a word or phrase, or an image (*ibid.*).

Wozniak et al. suggest coding images on two levels, first, the denotative level – what is depicted in the visual – and second, the stylistic-semiotic level – stylistic choices and pictorial conventions (2014, p. 481), however, for the purposes of this study, I believe that the denotative content is sufficient. Then, connotative meanings can be derived by relating the denotative content to issue frames and narrative elements in the text.

Here, only the lead image of each article will be described in terms of its denotative content, and in the second step, connotations that emerge from considering the picture in combination with frames and narrative elements in the verbal text will be noted. Limiting the number of images to

one per article is necessary for reasons of limited access to the images in the full articles in the case of the *FAZ* content and the large overall number of images in the *NYT* content.

The concept of actor-statements is borrowed from Wozniak et al. (2014) and used here to mean any direct or indirect quotes attributed to an external actor. Differing from Wozniak et al., I will disregard the journalist as an actor, so that only statements attributed by name to an external actor will be counted. After noting all actor-statements that occur in the sample, they will be categorized into types, for example ‘Donald Trump,’ ‘Academic,’ or ‘Domestic Politician.’

One paragraph may contain multiple actor-statements. The type and number of actor-statements will be summarized in Table 2 in the Appendix.

The U.S. and Germany are chosen for comparison for three reasons, the first being the author’s language proficiency in English and German and accessibility of the material. The other reasons, more importantly, are borrowed from Nacos et al. (2000), who justify their choice to compare the two countries with two main arguments: The first is the steep divide between the negotiation positions of the U.S. and Germany at the Kyoto international conference on climate change in 1997, the second is the difference in the role of news media and public opinion in the societies in the countries.

At the Kyoto conference, the U.S. and the EU held contending positions on the extent to which greenhouse gas emissions should be cut, how emissions trading should work, and whether developing countries should be included in a reduction scheme or not (Nacos et al. 2000, p. 45). Germany advocated the steepest emission reductions and thus took the position diverging the most from the U.S. among the industrialized nations (ibid.).

As a result of different institutional structures, processes, and powers, as well as different roles of the society in the decision-making process on foreign policy, German and American news media and public opinion play different roles (ibid., p. 49).

I argue that there is still a divide between climate policy positions between the two countries today, and although there was a period of closer cooperation during the Obama presidency, since the beginning of the Trump administration the positions are more starkly opposite than ever before. Germany understands itself as a driving force of the European Union’s climate policy, while President Trump made it clear already during his presidential campaign that

he believes that climate change is a Chinese hoax to harm the U.S. economy, and since he took office has been working to dismantle existing climate change mitigation policies.

For the reasons mentioned above, comparing framing in U.S. and German media on the chosen topic, although it is not strictly only about climate change, is a worthwhile task.

## 4.2. Empirical Data

The empirical material that is analyzed in this study consists of articles in the New York Times (*NYT*) and Frankfurter Allgemeine Zeitung (*FAZ*) selected from the online editions of both papers. Due to restrictions of time and space in this study, just one outlet in each country was chosen, although the initial idea was to compare articles from two papers in each country. The author does not claim that either choice is representative of the press as a whole in the respective country, but both are internationally known examples of the national quality press, with distribution numbers ranking at the top in the United States and Germany, respectively. They have been chosen by other researchers comparing news frames in the U.S. and Germany, for example Wozniak et al. (2014) also include the *NYT* and the *FAZ* alongside other outlets in their comparative multi-country media content study on climate change

Articles were chosen from the online editions using the search function on the websites. In the German case, *F.A.Z. Online Archiv* – the paper's online archive was used because articles from that date were no longer available in the regular free search. The search words were “Paris climate,” “Paris accord,” “Trump withdraw\*” (for the German search: “Klimaabkommen,” “Klimavertrag,” “Trump\* Ausstieg”) to be mentioned in the headline, sub-headline, or lead paragraph, published on June 1st, 2017. Items from the "Briefing" and "Dealbook" categories, opinion articles, podcast episodes (*NYT The Daily*), videos, and a book review, were excluded from the *NYT* search results. Similarly, items in the categories "Agenda" (press briefing), "Kommentar" (commentary), "Leserbrief" (letter to the editor) were excluded from the *FAZ* search results. These exclusions were made because the objects of analysis are news articles. The images included in the visual part of the analysis are the lead images accompanying each article, for reasons of availability any images in the rest of the article will not be included.

The final sample included five articles from the *NYT* and eleven articles from the *FAZ*. Although there are more than double the number of articles in the *FAZ*, the number of words in both papers was very close, 6,845 words in the *FAZ* (average per article: 622), and 6,408 words in the *NYT* (average per article: 1,282) as the *NYT* articles were on average roughly twice as long as the *FAZ* articles. Since the unit of analysis is a paragraph for the news frames, the imbalance in the number of articles can be disregarded on the textual level, although it persists in the number of images. The articles selected for the analysis and the accompanying images are listed in Table 3 in the Appendix.

## 5. Analysis and Results

This chapter provides an analysis of the articles in the sample regarding news frames, issue specific frames, actor-statements, and images. Similarities and differences to previous research will be highlighted, and inferences will be drawn that will help answer the research questions in the end.

### 5.1. News Frames

The first research question asked for which news frames were used in the coverage of President Trump's announcement to withdraw the United States from the Paris Climate Agreement. The five news frames specified by Semetko & Valkenburg are *conflict*, *human interest*, *economic consequences*, *morality*, *responsibility* (2000, p. 95-96). In order of overall frequency of appearance, the following four news frames were found in the sample of articles.

Most frequently used was the *economic consequences* frame. It was indicated by mentions of the words 'economic opportunity,' 'economic prosperity,' 'growth,' 'financing,' 'funding,' 'poor,' and 'cost-efficiency' in any lexical form. This frame was present in 21 paragraphs in the *FAZ* and 17 paragraphs in the *NYT*, altogether 38 times.

The second most frequently used frame was the *conflict* frame. It was coded to be present in the case of explicitly stating that a person, group of people or country is pitted against another entity with opposing objectives. The use of the word 'against,' as well as any lexical forms of the words 'defy,' 'challenge,' 'rebuke,' 'condemn,' 'oppose,' 'threaten,' and 'differences' indicate the presence of the conflict frame. It was found in 15 paragraphs in *the FAZ* and 11 paragraphs in the *NYT*, a total of 26 incidences.

The *responsibility* frame appeared third most frequently in the sample. It was found to be present when the words 'responsibility,' 'duty,' 'obligation,' 'blame,' or the expression 'own the problem' were used in any of their lexical forms. This frame was found in 14 paragraphs of the *FAZ* articles and six paragraphs of the *NYT* articles, a total of 20 occurrences.

Least popular was the *morality* frame, only appearing in two paragraphs of the *NYT* articles, while it was not found in any of the *FAZ* articles. It was indicated by the words ‘moral’ or ‘immoral’ explicitly mentioned in the text.

The *human interest* frame was not found in the sample even once.

Table 1 Incidences of news frames: number of paragraphs where frame is present

News Frame	FAZ (total number of paragraphs: 98)	NYT (total number of paragraphs:133 )	Total
Economic consequences	21	17	<b>38</b>
Conflict	15	11	<b>26</b>
Responsibility	14	6	<b>20</b>
Morality	0	2	<b>2</b>
Human interest	0	0	<b>0</b>

Comparing how frequently the frames were used between the *FAZ* and the *NYT*, the ranking of how often each frame was employed stays the same, with the exception of the *morality* frame, which was completely absent from the German articles. In both papers, the *economic consequences* frame was clearly the most used frame. The *responsibility* frame was more popular in the *FAZ*, used almost as often as the *conflict* frame, whereas it only appears about half as often as the *conflict* frame in the *NYT*.

Comparing these results with a previous news framing study, the ranking of how often each frame was used in Dutch news media is surprisingly similar considering the much wider spread of news topics that were examined by Semetko and Valkenburg (2000): their results ranked *responsibility*, *conflict*, *economic consequences*, and *human interest* before *morality*, which is quite congruent with the results above.

The frequent use of the *economic consequences* frame surrounding the news event here might be explained by the nature of the topics involved, climate change as the broader background theme and the politics of international agreements. An economic frame allows a complex topic to be simplified by boiling it down to one aspect, for example, carbon emissions, that becomes a stand-in for the entire problem of climate change. Carbon emissions can be quantified and measured in themselves and can also be related to other economic concepts such as jobs in the coal

industry. Hence, talking about this aspect of the whole complex idea helps to naturalize climate change to audiences who might be more familiar thinking in financial terms like cost, credit, tax, income, jobs, and so on (see Koteyko et al. 2010, p. 47). Of course, this frame per se does not include a judgment of whether climate change is a serious problem that needs to be addressed, and it is used both by mitigation-action proponents and opponents alike. Similarly, international agreements, like the Paris Accord in this case, are often complicated and lend themselves to being framed in terms of *economic consequences* such as financial gains and losses, trade advantages and so on to make them easier to understand for the audience.

The *conflict* frame serves to simplify a situation by reducing it to two opposing positions, inviting the audience to take sides. By using militaristic metaphors as in “leaders [...] maintained a defiant front” (NYT5), “Germany and China have been striving to demonstratively close the ranks against economic isolationism” (FAZ4) or “In Mr. Trump’s view, the Paris accord represents an attack on the sovereignty of the United States” (NYT1) the effect is intensified by implicating war and physical confrontation. It is not surprising that this frame proved to be popular in this sample of articles, even in the non-sensationalist press like the *FAZ* and *NYT*, the *conflict* frame helps capture audience interest and simplifies complex debate (see Semetko & Valkenburg 2000, p. 95).

Both papers mainly use the *conflict* frame in the same way; pitting the U.S. against most other countries in the world or specifically named other countries, and Donald Trump against other heads of state, business leaders, or members of his own staff. Additionally, the *FAZ* uses the conflict frame in reference to contested points of discussion between Germany and China, or Merkel and Li, that are dealt with alongside the news about Trump’s withdrawal from the Paris deal.

The *responsibility* frame was the third most frequently used in this sample. In the American paper, it is used in statements about climate change and emissions in five out of six cases, for example: “[...] the large American role in causing climate change creates an outside responsibility to help fight it, including an obligation to send billions of dollars abroad [...]” (NYT4); “In cumulative terms, we certainly own this problem more than anybody else does” (NYT4); “Americans [...] are responsible for almost a third of the excess carbon dioxide in the atmosphere” (NYT2). In the German articles, this frame is mostly used in statements about honoring or

implementing the Paris agreement, upholding international rules in general (“Both countries [...] are responsible for fostering their partnership and defending a ‘rule-based’ order” (FAZ4)), or placing blame on a specific person (“But Trump is not to blame for everything.” (FAZ2)). It appears in relation to carbon emissions only once (“[...] responsible for 16 percent of global CO2 emissions” (FAZ11)). This indicates a different quality of meaning of ‘responsibility’ in the two sources.

In the *FAZ*, there is a stronger emphasis on present and future contractual obligations that different countries have committed to by signing agreements, in contrast to a more immediate sense of liability for existing and past emissions as a physical, quantifiable fact in the *NYT*. Again, this could be rooted in a perceived need on part of the American paper to stress the reality of climate change and connect it to human-made carbon emissions due to the past experience in the U.S. of balanced reporting leading to scientifically unwarranted bias in the representation of climate change (see Boykoff & Boykoff 2004). Repeating the U.S.’ responsibility as the cumulatively biggest emitter of carbon to make strong commitments to mitigating climate change reveals the underlying stance that the Paris agreement was such a commitment and withdrawing from it is wrong and irresponsible.

The *morality* frame was not present at all in the *FAZ* and appeared only twice in the *NYT*. As both instances are also attributed to external sources, although unspecified in one instance (“Some said it was a moral imperative [...]” NYT2) it appears that this frame is avoided by journalists at both papers. This might have to do with the fact that these are both serious media outlets, and the news in question does not lend itself to be framed in terms of morality. This is consistent with Semetko & Valkenburg’s results, who found “very little evidence” of the morality frame in the Dutch national media (2000, p. 104). The results might differ if we examined more sensationalist media.

The absence of the *human interest* frame again matches Semetko and Valkenburg’s results, who found that it was overall the second least popular frame, more likely to appear in the sensationalist paper than in the serious outlets, and more popular in television news as opposed to the press (2000, p. 104). As will be discussed below, just one instance was found where a *human interest* frame is present in an image.

Possible reasons for the unpopularity of this frame for the news in question are the abstract nature, global importance, and uncertain consequences of withdrawing from the climate agreement, all of which are not readily expressed using a personal, emotional angle. Moreover, journalists working in quality media will likely find that the serious character of political, legal, and climate-related topics is negatively impacted by dramatization with a human angle.

## 5.2. Issue-Specific Frames

While news frames, as discussed above, are generic and not limited to a certain theme, issue-specific frames, as the name suggests, are frames that pertain “only to specific topics and events; that means every issue has different issue-specific frames” (Entman et al. 2009, p. 176). I argue that there are two main issue-specific frames that can be identified in this sample and that are constructed specifically around the news event of Donald Trump withdrawing the U.S. from the Paris Accord. Using the four frame elements proposed by Entman, stating that a frame promotes a “*particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation*” (1993, p. 52, italics in original), the two issue-specific frames that emerge from the material will be defined below. These frames are present in the article as a whole rather than at the paragraph level.

### 5.2.1. Setback frame

In all *NYT* articles and in seven out of eleven *FAZ* articles, I find a frame that I will call “*setback frame*,” as the word is used repeatedly:

It is also a major setback for the worldwide effort to combat global warming. (NYT2)

[...] it could prove to be a major setback for international efforts to avert drastic global warming. (NYT3)

The decision to walk away from the accord is a momentous setback, in practical and political terms, for the effort to address climate change. (NYT4)

The problem is defined as a setback for American pro-climate efforts after Trump’s withdrawal from the Paris Climate Agreement. The underlying reasoning is that climate change exists and poses a danger for different aspects of human life, therefore it should be acknowledged as a serious problem and action should be taken to mitigate its impacts. The Paris Climate Agreement constitutes a commitment to take such action. Pulling out of the agreement puts the

country in a position of being isolated from the international community of nations, foreign heads of state, supranational entities such as the UN and the EU, business leaders and environmentalists. Domestically, the setback is evident on the political level, as some states and cities voice support for a continuation of Paris deal-policies and take a stand against the government and federal policy, as well as causing a deeper divide between Democrats and most Republicans more generally.

The causal interpretation is that Donald Trump is the main person responsible for the problem, along with supporters such as Stephen K. Bannon and Scott Pruitt, notably not including his daughter Ivanka and Jared Kushner, who are credited with having tried to dissuade Trump from leaving the agreement. Trump had made leaving the Paris deal a campaign promise and repeatedly talked about climate change being a hoax invented by the Chinese to harm the American economy at rallies and on Twitter, so there is no doubt that Trump was planning to withdraw, it was not a sudden decision.

The decision to withdraw from the agreement is associated with a loss of American global leadership, alienating foreign heads of state, and ceding technological and economic development to other countries and is therefore evaluated as morally reprehensible. Trump is acting against the stated preferences of a majority of the people – as evident from polls cited – and it is denied that he has their best interest in mind. Also, as the historically biggest carbon emitter, America has an indirectly stated moral responsibility to contribute to alleviate the effects of climate change.

There is no treatment recommendation in the true sense of the word, as Trump is the main reason for being in this situation, only he could potentially reverse his decision at this moment. Yet, there is hope for a change in the future, as a new administration could potentially rejoin the agreement, and make up for the time that will have been lost in the fight against climate change. However, the implication is that the audience can already now support cities, states, and businesses that are continuing to work against climate change.

The setback frame also includes strong criticism of Donald Trump that becomes obvious when considering background information that most readers likely can draw upon, for example statements he made during the presidential campaign. Trump's leadership capabilities are discredited by including statements from an expert on negotiations and agreements, an implicit pique at Trump who often presents himself as an expert negotiator and dealmaker:

But Christiana Figueres, the former United Nations official who led the negotiations, said his remarks underscored a lack of understanding of how international agreements work. (NYT5)

Trump is presented as isolating himself from the international community with his decision, leaving Syria and Nicaragua as the only other countries not having signed the agreement (NYT2 and NYT5). He is shown to alienate other heads of state and even harm the international image of the U.S. to the same extent that the Iraq war did: “The last time the United States’ standing had fallen so low was during its invasion of Iraq, several said.” (NYT5). Two voices supporting Trump’s decision are presented as regressive, condoning environmental pollution, and aggressively dismantling Obama-era achievements, respectively, which reflects negatively on Trump:

Grzegorz Tobiszowski, [...] commended President Trump’s for his decision as he was signing an agreement on developing a new hard coal-fired power unit in Jaworzno, a city in southern Poland and one of the most polluted regions in Europe. (NYT5)

“I applaud President Trump and his administration for dealing yet another significant blow to the Obama administration’s assault on domestic energy production and jobs,” said Senator Mitch McConnell of Kentucky, the majority leader. (NYT1)

A strong emphasis on the dangerous reality of unchecked climate change is present throughout all *NYT* articles and stated in clear and drastic language: “[...] the entire planet will suffer as a result of history’s largest emitter retreating on climate change.” (NYT5). The long and difficult road to reach the Paris Agreement in the first place is repeatedly pointed out, and Obama is credited with seeing the deal through.

[...] the long, grinding process of slowing climate change. (NYT3)

It was a landmark diplomatic achievement and the pinnacle of President Barack Obama’s environmental agenda (NYT2).

The undoing of Obama-era policies after so much hard work has been put into them is described using a tone of loss, exasperation, and sadness: “The U.S.’ withdrawal is a sad day for the global community” (FAZ3; translated from German by the author). This is underlined by lexical choices such as ‘dismantle,’ ‘reverse,’ and ‘collapse,’ that emphasize destruction and going backwards instead of to the future.

Describing that American leadership in several global arenas – politics, economy, technology, and science – is ‘given up’ and leaves a ‘vacuum’ that potentially will be taken over by other competing nations functions to dramatize the event and alludes to a sense of loss and

being left behind, and in some cases Trump is named as being responsible for this undesirable outcome.

[...] Miguel Arias Cañete, the European Union's commissioner for climate, said that "today's announcement has galvanized us rather than weakened us, and this vacuum will be filled by new broad committed leadership." (NYT1)

Mr. Trump is creating a vacuum of global leadership, David E. Sanger and Jane Perlez write, and China may be the biggest beneficiary (NYT2)

It means the United States — the country with the largest, most dynamic economy — is giving up a leadership role when it comes to finding solutions for climate change. (NYT4)

The theme of global leadership is mentioned in the German articles as well, although sometimes the 'vacuum' left by the American withdrawal from the accord is only implied:

[...] both sides [the EU and China] will make a clear commitment to implementing the agreements made in Paris and assume a leading role in global climate protection efforts" (FAZ4; translated from German by the author)

Granted, it would not be good if America left [the agreement]. But Europe would claim a natural leadership role in climate action. (FAZ8; translated from German by the author)

### 5.2.2. No Impact Frame

In two of the FAZ articles (FAZ2 and FAZ6) I find a frame that I will call "*no impact frame*," which will be defined in the following, again using Entman's four frame elements.

Regarding the problem definition, this frame defines the act of the U.S. withdrawing from the climate deal as unproblematic and foreseeable, so it is not a problem in the narrower sense, but rather a situation or event. Climate change exists and is a problem for humans, but in contrast to the setback frame discussed above, it is not an urgent threat. Even if the U.S. leaves the Paris Accord, policies that help lower emissions, such as incentives for renewable energies and cheaper prices for natural gas will persist because the market economy drives that demand.

The United States' withdrawal from the Paris Climate Agreement that was announced by President Donald Trump on Thursday evening does not have any immediate effects. (FAZ6; translated from German by the author)

The cause of the situation is Trump's withdrawal from the Paris agreement or his announcement that he will do so.

There is no moral judgment, it is presented as a neutral event, with a business-as-usual tone. Withdrawing from the climate agreement brings no improvement but things will also not get

worse. Many statements in these articles are framed in terms of *economic consequences*, so there is a greater emphasis on economic reasoning than on moral evaluation.

Similarly, since the event is not problematized, there is no remedy suggested. The narrative is that the Paris Agreement is not that good as a treaty in the first place, so even if it completely fell apart, it would not impact climate change mitigation significantly. By stating that ‘economists’ believe this, the statement becomes more impactful and seems scientifically sanctioned.

That the agreement does not prescribe any sanctions against those who violate it does not make things easier (FAZ2; translated from German by the author)

Economists consider the whole system to be flawed. (FAZ2; translated from German by the author)

FAZ2, titled “Flaws in the Climate Agreement – A Momentous Industrial Accident” (translated from German by the author) describes how the Paris Agreement may be doomed to fail independently of Trump’s withdrawal because it does not provide binding goals or sanctions, and cautions that Germany’s efforts to protect the climate might end up a negative example for investing too much money into renewable energies despite the country’s small share of global emissions. Adapting to climate change and securing cost-efficiency in measures to protect the climate are the suggested solutions.

The Paris climate deal is portrayed satirically as an agreement that was first received overly enthusiastically but did not deliver what it promised. The catchy metaphor of an “industrial accident of momentous proportions” likens the U.S. withdrawal from the deal to a nuclear accident on a political level, a much more dramatic depiction than is delivered in the article that follows.

In December 2015 the “Paris Compact” had received the highest political honor in being called “historical.” Seventeen months later it looks as if international politics has suffered an industrial accident of momentous proportions. (FAZ2; translated from German by the author)

The overall tone is pessimistic regarding the perspective of reaching any of the global warming goals stipulated in the agreement, and it is mentioned that negotiations and climate politics have slowed down:

Since the international climate-negotiators have dug down into the details of everyday business again, negotiations are not going smoothly. (FAZ2; translated from German by the author)

Knowing what we know today, prospects for the future are sobering. (FAZ2; translated from German by the author)

There is also an implication that the climate agreement is creating conflict between the wealthy nations and the poorer countries, emphasized by word choices that conjure up an image of chaos.

Without changing course politically, the Paris agreement is at risk for failure with its hardly manageable system of uncoordinated pledges to limit emissions by individual states (FAZ2; translated from German by the author)

[...] these debates are accompanied by ever more financial demands by the poorer nations to prevent climate change and adapt to it. (FAZ2; translated from German by the author)

Another striking difference of the *no impact* frame to the more common (in this sample) *setback* frame is the different characterization of former president Obama and his role in climate politics. Whereas the *setback* frame mentions Obama as an important international figure when he joined the Paris Agreement and includes a direct quote of his reaction to the withdrawal, here he is presented as “unsuccessful in climate policy, contrary to the general impression of him” and as someone “unable to win majorities, limited to governing by executive order” (FAZ6, translated from German by the author). It is pointed out that the Paris Agreement was never ratified in the Senate and as such has had a limited impact in the U.S. regardless of Trump’s action. This is only mentioned in passing, if at all, in the articles framed in terms of *setback*. While the *setback* frame implies that a democratic president could have landed on a much better trajectory to reduce climate gas emissions, and at least staying in the Paris agreement would have meant less emissions even under President Trump, the *no impact* framed FAZ6 contradicts this explicitly: “A democratic president could hardly have achieved more” (translated from German by the author).

In two of the *FAZ* articles, FAZ5 and FAZ9, no issue-specific frame was found.

### 5.3. Actor-statements

An actor-statement is constituted by an indirect or direct quote explicitly attributed to an external actor, i.e., not the journalist or news source. For this specific case, the following six categories of actors are enough to describe all actor-statements that were found in the sample of articles.

The first one is Donald Trump, as the news of withdrawing the U.S. from the Paris Climate Agreement originated from his announcement thereof in the Rose Garden and even in separate remarks before that. The next category includes domestic politicians (German in the case of the

*FAZ*, and American in the case of the *NYT*), not including Donald Trump in the U.S., so actors in this category are either members of the government or the opposition party. The third category consists of international politicians, this includes any American political actors quoted in the *FAZ*, excluding Donald Trump, and any German politicians quoted in the *NYT*, as well as any other international political actors quoted in both outlets, such as heads of state of India, China, France, or Italy among others. The next category encompasses policy experts, think tank speakers, and – in just one instance – the leader of a religious charity organization. The fifth category are academics, specifically professors, whose university affiliations were always stated with the quote. The last category is business actors, always cited with their name and the business they represent.

The number of actor-statements per category in each article is listed in Table 2 in the Appendix.

Table 2 Number of actor-statements per category

<b>Actor-statement</b>	<b>FAZ</b>	<b>NYT</b>	<b>Total</b>
<b>Politician - international (not Donald Trump)</b>	21	22	43
<b>Donald Trump</b>	15	18	33
<b>Politician - domestic (not Donald Trump)</b>	16	5	21
<b>Policy expert/think tank/other</b>	3	4	7
<b>Academic</b>	0	7	7
<b>Businessperson</b>	2	4	6

As can be seen in the table, most actor-statements belong in the ‘international politician’ category. However, the large number of statements attributed to international political actors in the *NYT* mainly comes from one article (19), which lists a large number of international reactions to Trump’s announcement with mostly direct quotes. In the *FAZ*, the mentions of international politicians are more evenly distributed between the articles.

The second most mentions overall are quotes attributed to Donald Trump, which is of course not surprising regarding the event in question. The distribution across the articles is rather even in the *FAZ*, with most pieces quoting Trump one or two times, in the *NYT* one article sticks out with 8 Trump-quotes, while the rest include two or three each.

This is followed by domestic politicians, who are quoted three times more often in the German paper, where most quotes are attributed to Angela Merkel. The *NYT* only quotes domestic politicians (other than Trump) in one of the articles.

Fourth most frequently quoted are policy experts, think tank spokespeople and other interest group representatives. In the American case, these are quotations from climate policy or climate change experts, and one member of a religious relief and development group. In the German case, the quotes in this category stem from an economist at a policy-consulting institute.

Academic sources are quoted only in the *NYT* and consist of statements by university professors, scholars or experts at a university.

Lastly, businesspeople were quoted six times overall, this is mainly the same Twitter-statement by Elon Musk, who had agreed to participate in two business-councils set up by President Trump earlier and now declared he would leave those panels. In the *NYT*, a few other corporate leaders are also quoted.

Overall, the similar number of actor-statements by Donald Trump in both countries (*FAZ*: 15; *NYT*: 18) shows that to relay the news – originating from Donald Trump in this case – and to provide background information to the events, journalists at both papers chose to include direct and indirect quotes from the speech in the Rose Garden and some earlier statements at a similar frequency to word count ratio overall. The balanced number of Trump-actor-statements across all articles, with one outlier in each paper, indicates that they are neither overemphasized nor understated, and that there might be a proportion that journalists gravitated towards in this sample.

The comparison of the number of actor-statements by international politicians gives a very different impression. While all but one of the *FAZ* articles quote an international political actor mostly one to three times, just two of the *NYT* articles include such quotes, with the majority (19 out of 22) found in one article. Three out of five articles did not include any actor-statements by international political figures, which suggests that international political reactions to the news were less important. The *FAZ* quotes EU- and UN-officials, heads of state of other EU-countries, India, and China, as well as American politicians. This emphasis on international voices is connected to two simultaneous events: Li Keqiang, Chinese Premier of the State Council, and Narendra Modi, India's Prime Minister, visiting chancellor Angela Merkel in the week of Trump's announcement,

and the joint statement by Merkel, Macron, and Gentiloni issued in response to Trump were newsworthy events in the German context and covering them is not surprising. However, this could also be an expression of Germany having stronger ties to the international community, especially as a leader in the EU and understanding itself as a leader in climate policy. It would be expected that Merkel makes climate policy a priority in her talks with the visiting heads of state, and that would prompt actor-statements by these international politicians. However, Trump's announcement very likely sparked a greater emphasis on renewing climate commitments, and it seems likely that other topics such as human rights and intellectual property issues in China would have been covered more extensively in its absence.

The different weight of actor-statements by domestic politicians (*FAZ*: 16, *NYT*: 5) can be explained in part by Trump being the main domestic political actor in the U.S., whose statements are counted separately, while Merkel's statements are counted in this category in the German paper. All five domestic politicians' actor-statements in the *NYT* are in the same article and include statements by members of the government as well as Democratic leaders. Still, this perspective is absent from four out of five articles, which points to less importance being attached to contrasting or supporting Trump's action with other domestic political voices. In Germany, the norm of balance might demand of journalists to include quotes from a variety of parties as well, so that having a multi-party system – rather than a two-party system as in the U.S. – in itself invites more domestic viewpoints to be reported.

There were four actor-statements by experts and members of think tanks present in three articles in the *NYT* and three actor-statements over two articles in the *FAZ*. Here it is interesting to note that all three expert-quotes in the *FAZ* stem from an economist at a research and policy consulting institute who is arguing for taking Trump's withdrawal from the Paris Agreement as a chance for the international community to change strategies, focusing on adapting to climate change and cost-efficiency of climate change mitigation efforts. This expert, along with unspecified 'other renowned economists' is the main source for the economic-skeptic *no impact* frame put forward in this article.

The *NYT*'s actor-statements in this category stem from climate change-experts at a New Delhi policy research center and the U.S. Center for Climate and Energy Solutions, and a leader on climate issues at a religious relief and development group. Each of these statements are

opposing the U.S.' withdrawal from the Paris Agreement, either cautioning that other countries might be let off the hook in climate change mitigation efforts using an economic consequences framing, declaring disagreement with Trump's statements about the deal, or proposing the morality frame to express the unfairness of the situation that countries who have contributed least to climate change are the ones to suffer first and foremost of its consequences.

At this point I will note that an analysis published by the U.S. research and policy analysis center Rhodium Group is referred to in one article in each paper (FAZ6 and NYT3), although it was not counted in the category of expert-actor-statements as there was no specific person quoted. Interestingly, the gist of the *FAZ* quote is that experts have been underestimating which developments have actually improved the U.S. climate record, namely renewable energies becoming cheaper faster than expected, and American gas deposits being larger than previously assumed. Contrastingly, the *NYT* quote of the same report focuses on the estimated 15 to 19 percent fall in emissions below 2005 levels by 2025 that is likely to happen under Trump's policies as falling short of the 26 to 28 percent cut promised by the Obama administration as part of the Paris Agreement. I argue that this is a good example of the same data being presented with a different angle, to make a different point: the *FAZ* article explains how Trump's withdrawal will not make any difference in U.S. greenhouse gas emissions, as Obama's goals in the Paris deal were never ratified in Congress and were not binding targets even nationally, which helps establish the *no impact* issue framing. The *NYT* article contrasts the numbers alongside an explanation of how the U.S. will likely fall short of what might have been achieved had the agreement remained in place, which again contributes to the *setback* framing of the entire article.

Academics are only quoted in the *NYT*, while results of studies are mentioned in the *FAZ* a few times, they are never attributed to a specific person and thus do not count as an actor-statement. The seven actor-statements occur across three articles, there are two statements by climate policy experts at a university, two by a scholar of environmental politics, two by an international relations professor, and one by a management professor.

Five of the actor-statements are comments on possible implications for the international community of the U.S. leaving the climate agreement. The general thrust is that other countries will likely react by staying committed to the agreement or even begin to cooperate more closely on mitigating climate change. Two statements deal with carbon pollution more generally, framed

in terms of responsibility (of the U.S. as the historically biggest carbon emitter) and in terms of progress and development opportunities for poorer countries (basic needs can be met with clean energy and fossil fuels are not desirable in themselves).

While all academic actor-statements provide some pieces of information, I argue that they serve to add authority to an underlying hopeful narrative: the international community will increase pro-climate efforts, China or India will take on leadership roles, and developing countries will achieve economic progress with clean energy, even as the U.S. are backing away – but possibly to come back four years later under the next president.

Another reason for giving space to academic scholars in the *NYT* articles might be that journalists feel a lingering need to give credibility to climate change because of the historically biased representation of the reality of climate change in the press, as discussed above (Boykoff & Boykoff 2004; Schlichting 2013). Accordingly, the German paper might not consider it necessary to cite academic sources because the scientific reality of climate change has not been contested. However, since the academic sources cited in this sample of *NYT* articles were not climate scientists, but rather policy experts, including them might not be a matter of reinforcing the scientific reality of climate change, but rather another approach to integrate a perspective on international politics and present it with more weight by quoting sources in academia. Where the German paper can likely rely on its target audience to be familiar enough with European and other international political figures to situate their names and statements in a sensemaking context, the *NYT* might choose to cite an academic policy expert to summarize international viewpoints and forecast developments, with the added benefit of scholarly clout attached to the source. Thus, some of the international politicians' actor-statements that were more consistently found in the *FAZ* might be substituted by academic sources in the *NYT* – however, this remains speculative because this study does not include interviews with journalists and I cannot speak to their motivation for opting to include some actor-statements over others.

With two actor-statements originating from businesspeople in the *FAZ* and four in the *NYT*, this is the overall least used category of actor-statements. However, to which effect these quotes are used is quite different between the papers. The *FAZ* describes Elon Musk as a “colorful technology entrepreneur,” and “billionaire” who is “touting” the climate agreement (FAZ5), which is a rather vivid characterization around relatively little factual information – Musk having

announced on Twitter that he would leave the business councils he had joined if Trump was to withdraw from the Paris Climate Agreement. The *NYT* provides more context to the same core of factual information – Musk leaving the business panels – by quoting more of his Twitter message, including the assertion “climate change is real” and “Leaving Paris is not good for America or the world,” and does not add any characterizing descriptions of the person, simply referring to him as ‘Mr. Musk’ after providing the full name once. Moreover, the Trump quote

“At what point does America get demeaned? At what point do they start laughing at us a country? We don’t want other leaders and other countries laughing at us anymore. And they won’t be.” (NYT1)

is contrasted to “business leaders like Elon Musk of Tesla, Jeffrey R. Immelt of General Electric and Lloyd C. Blankfein of Goldman Sachs” (NYT1) saying that the decision to withdraw from the agreement would harm the economy because the jobs of the future are ceded to overseas competitors. The statement by Trump, describing an emotional character revealing an (arguably irrational) fear of being ridiculed is juxtaposed to a reasonable-sounding piece of analysis drawing on the *economic consequences* frame, supported by three authoritative business names. Whereas the *FAZ*’s characterization of Musk almost discredits his business acumen, the *NYT* introduces him as an antithesis to Trump.

A similar contrast is achieved later in the same article, where Trump’s quote “It is time to put [...] Pittsburgh, Pa. [...] before Paris, France [...] It is time to make America great again.” (NYT1) is preceded by a quote by Jeffrey Immelt of General Electric, stating that “[c]limate change is real” and “industry must lead and not depend on government” (ibid.) and followed by a quote from Pittsburgh mayor Bill Peduto’s tweet saying that the Paris agreement’s guidelines will be followed “for our people, our economy & future” (ibid.). The chosen pieces of direct speech by Trump stand out as peculiar and inconsistent when flanked in the text by the more logical statements, often employing *economic* framing.

#### 5.4. Images

By including an analysis of the visuals connected to the verbal texts of the articles, I hope to gain a deeper understanding of the multi-dimensional message that a reader of these articles would receive. Although the complex situation of the news event examined here – Trump’s announcement to withdraw the U.S. from the Paris Climate Agreement – cannot be depicted

explicitly in an image, the choice of the visual, its denotative content, and the connotations that emerge from the picture itself, as well as the picture seen together with the verbal text, can be analyzed.

The denotative content of each image is listed in Table 4 in the Appendix. For reasons of brevity, only the connotative content will be discussed here, as this is the starting point for the analysis of how the image is linked to the verbal text. Given the uneven number of articles selected from both news outlets, and the small number of articles overall, no importance is assigned to how often a specific image type is used and this will not be compared between the countries.



*Image source: FAZI; FAZ11 (see Appendix)*

In two of the *FAZ* articles, *FAZ1* and *FAZ11*, the lead images are similar and will be discussed together here. The photo in *FAZ1* establishes newsworthiness by showing heads of state at an official event but is more interesting than the typical staged group picture because it captures a moment where they seem unprepared to be photographed. The caption plays on the literal meaning of ‘looking in the same direction’ – as Trump is the only one looking in a different direction than the others – and the figurative meaning, adding ‘on the topic of climate change,’ so that the picture is a humorous shorthand for what is going to be elaborated on in the article’s text. *FAZ11* is accompanied by a similar image, however, one that was staged by Oxfam activists wearing rubber heads impersonating the G7 leaders. The scene that is pictured shows Trump as a troublesome, defiant blocker of progress towards the Paris Agreement, the other politicians urging him on to join them. The cartoonish, oversized rubber heads make it clear immediately that this is an exaggerated satirical scene, and the caption informs the reader that these are indeed Oxfam activists. In the verbal text, Oxfam is not mentioned, so this picture represents the only activist actor-statement in all sampled articles. Both photos have in common that the other leaders are moving or looking to the right-hand side of the image, symbolizing orientation to the future, while Trump is sitting down or looking in the other direction, implying that he is not in agreement with the rest of the group.



*Image source: FAZ2; FAZ6; FAZ7 (see Appendix)*

FAZ2, FAZ6, and FAZ7 also use similar lead images; the pictured industrial sites and cars on a congested highway have in common that they are generic-looking, could-be-anywhere symbols for pollution and anthropogenic climate-change. Images of this kind are often used in the media and have become familiar condensation symbols to Western audiences connoting human exploitation of nature, industrial progress, and its negative consequences for the environment. However, two of the images (FAZ2 and FAZ6) appear less imposing and “dirty,” and can therefore be seen to support the no impact frame present in the verbal text of these articles. The FAZ7 image, on the other hand, depicts a grey and desolate state of pollution and congestion, supporting the *setback* frame present in the article.



*Image source: FAZ3; FAZ8; FAZ10 (see Appendix)*

Donald Trump giving a speech is pictured in the photos for FAZ3, FAZ8, and FAZ10. The photos provide a quick entry into the articles, together with each headline – mentioning Trump in all three cases – they establish that the story is newsworthy as they deal with an internationally well-known and important political actor. The reader will access any connotations to Trump that are present in the individual’s mind-frames, photos of this kind would have been very familiar to the audience already in 2017.



*Image source: FAZ4; FAZ9 (see Appendix)*

FAZ4 and FAZ9 lead with photos showing Angela Merkel with China's Li Keqiang during his visit in Berlin. The FAZ4 picture is a rather typical shot of two politicians talking to each other, Merkel is immediately recognizable to the German audience, Li much less so, but the caption provides his name in both cases. These images establish a political topic, and by portraying Merkel meeting with a foreign politician, set a broader theme of international relations and alliances rather than the Paris agreement or the environment. This is consistent with the textual content of these two articles, in which Trump's withdrawal from the Paris agreement is merely a starting point to discuss the implications for Germany's strengthening of its ties to China and India.



*Image source: FAZ5 (see Appendix)*

FAZ5 is accompanied by a photo of Elon Musk, who is also mentioned as the main actor in the headline. As an entrepreneur who is known for developing electric cars and reusable rockets, he elicits connotations of future-oriented technological solutions to improve human life and provides a counterpoint to Donald Trump and his decision to abandon the climate agreement. Seen together with the headline "Elon Musk threatens to end his consultancy work if [Trump] exits the climate agreement," a *conflict* frame is created, setting Musk and futuristic entrepreneurship against Trump and regressive thinking.



*Image source: NYT1 (see Appendix)*

NYT1 shows a photo of Donald Trump giving an official address, underlining the newsworthiness of the article and creating a link to the headline that begins with ‘Trump.’ The photo provides a shortcut for the reader to recall any preconceived opinions of the president that are present in his or her mind – I believe that everyone reading the article will have a set of opinions and feelings about Donald Trump to draw upon, which will likely be either positive or negative due to the polarizing quality of his person. Together with the headline and lead text, the image connects the abstract and complex “climate” issue to the political arena and the American voters’ choice in future elections. For readers who are not in favor of Donald Trump, who might also believe that the electoral system does not honor the majority’s choice, this picture in context with the verbal text could evoke feelings of loss of control or exasperation with climate politics.



*Image source: NYT2 (see Appendix)*

The photo with NYT2 serves as a condensation symbol for the reality of anthropogenic climate change. By depicting an industrial object, devoid of humans, intruding on the natural environment with a plume of smoke or water vapor coming from the chimney, it offers a cognitive shortcut to environmental pollution and human activity as a cause for climate change. Together with the educational tone of the headline, it is creating a sense of urgency in the audience to inform themselves about a looming danger, emphasized by the dark color and menacing mood of the image, supporting the *setback* frame present in the verbal text of the article.

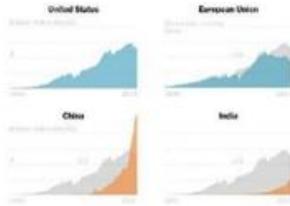


Image source: NYT4 (see Appendix)

The only image that is not a photo is the graph accompanying NYT4. Showing a chart of CO<sub>2</sub>-emissions over time, comparing the U.S. with other countries helps to establish the scientific reliability of the article. The graph expresses the abstract concepts of climate change and pollution as a measurable quantity, indicating that it is possible to calculate specific countries' contributions to climate change, thus framing emissions in terms of historic responsibility. The picture serves as a reinforcement of the headline, proving that the U.S. is “the biggest carbon polluter in history” (NYT4) in the visual mode of communication and is consistent with the verbal framing in terms of *setback*.



Image source: NYT5 (see Appendix)

NYT5 leads with a photo depicting a man next to fires and flying sparks in the dark. I assume that it is a striking and rather unfamiliar scene to most readers. At first strangely beautiful in its composition and lighting, the details in the background taken together with the text in the caption reveal a different layer of the photo. The description ‘an unauthorized steel plant’ implies that the working conditions are probably unsafe and unacceptable by Western standards. This information makes the situation feel foreign and distances the reader from the person in the picture, although it might also evoke feelings of pity and, functioning as a *human interest* frame, add an individual human face to the story that follows. However, the connection to the Paris Agreement and climate change is not immediately obvious, nonetheless it can be considered supportive of the *setback* framing of the article. While the caption states that the photo is taken in Mongolia, and

signatory countries to the agreement are called on to take measures to address climate change, neither the photo, nor unauthorized industries, nor Mongolia is mentioned again in the verbal text.

## 6. Discussion

Given the very limited scope of the study, with just 16 articles from two publications, we cannot generalize the findings in a meaningful way to make claims about different topics or other news publications in the U.S. and Germany. However, some interesting conclusions can be drawn that might be a starting point for further research in this field.

Firstly, I find that the five generic news frames have little explanatory power in a study that is limited to one news topic such as this one. In Semetko and Valkenburg's study (2000), multiple news topics – such as politics, crime, and social welfare – were studied to find whether certain frames are used more often in news about a certain topic. Nevertheless, the even distribution of news frames frequency between the U.S. and German articles as well as the popularity ranking of the frames found in this sample does align well with Semetko and Valkenburg's findings about the frames most often used with European political news topics, notably the unpopularity of the *morality* frame. Only the *human interest* frame's absence in this study differs significantly from their results, as the researchers found human interest framing in 13% of European political news stories (Semetko & Valkenburg 2000, p. 105). Of course, my results might have changed if this project had included a larger number of articles from more outlets.

The relatively equal popularity of the generic news frames between the countries might allow us to conclude that journalistic cultures in the U.S. and Germany are similar in this respect, and that journalists at both publications assigned similar news values to the story and reported it using similar framing. This is however a question of journalistic frame-building practices that were not investigated here but could well be part of a future research project.

It is also interesting to note that a Chilean study of news sharing on social media found that a *morality* frame increased sharing of a news story, whereas stories framed in terms of *conflict* and *economic consequences* were shared less often (see Valenzuela et al. 2017). However, as in the present case, the Chilean journalists rarely used the *morality* frame, whereas the *conflict* frame was the most prevalent (second most prevalent in this case), which led the researchers to conclude that there is a “disjuncture between the frames used by journalists and audiences” (ibid., p. 821). As social media become an ever more important source of news, it is worth studying whether these behavioral effects of different frames hold up in other countries and whether there might be a

feedback loop from audience behavior to journalists in terms of framing news stories differently to increase engagement.

As only looking at generic frames deductively has some shortcomings, including issue-specific frames that are inductively specified and can be found on the article level is even more important. I find that the *setback* frame and the *no impact* frame, as defined above, are richer in content and include not only common words or expressions, but also the overall tone of the story and narrative elements. Although I did not find any strong examples of mythical narrative archetypes, such as hero, scapegoat, or victim (Bird and Dardenne 2009, p. 206 f.), I believe that the stories that were framed in terms of American *setback* had an overarching narrative that made a convincing case for the reader to side with: abandoning the Paris Agreement was a bad decision, as it was a hard-earned achievement to address climate change globally, which is a threat to human life on earth. Everyone agrees with this, including international experts and politicians, except for Donald Trump and a few other misguided people who are future-averse and hard at work undoing past achievements.

Conversely, the *no impact* frame made the case that although climate change does exist and pose a danger to human life on earth, the Paris Agreement was never an appropriate instrument to mitigate climate change as it did not contain binding and enforceable emission limits. The U.S. leaving the agreement will not have any impact whatsoever, previously set emissions targets are already being exceeded globally. The reductions in carbon emissions that have been achieved have nothing to do with the agreement but are due to a market-driven shifts. Therefore, focusing on adapting to climate change without overspending on investments into renewable energies is important.

The inclusion of actor-statements into the analysis helps to gauge how visible certain actors and sources are in the articles. Considering whose voices are included and how often offers another layer of understanding the story as a whole. Whereas the more frequent inclusion of domestic politicians in the *FAZ* articles can easily be explained with the domestic interest in Chancellor Merkel's statements, the different weight of actor-statements by international politicians (although roughly the same number in both papers, the *NYT*'s such statements were almost all in the same article) and the inclusion of academics in the *NYT* but their absence in the *FAZ* are more telling differences.

The more balanced inclusion of international politician actor-statements in the German paper can be understood against the background information that foreign heads of state were visiting Germany around the same time. The news of Trump's decision would have prompted journalists to include statements by these Chinese and Indian politicians because being in the country made them more newsworthy than they would have been otherwise. Another reason might be that the political environment of Germany as a part of the EU demands more inclusion of foreign actors in stories that involve international politics, negotiations, or agreements. Again, this could only be answered conclusively in a study that includes interviews with journalists and asks for their practices.

The inclusion of academic actor-statements in the *NYT* articles strongly suggests an awareness of the historical discourse denying or questioning climate change and a willingness on the journalists' part to avert such a discussion preemptively. However, to be sure that this is indeed the case, we would again have to ask the journalists themselves.

The complete absence of actor-statements by climate activists and representatives of people who might be affected by climate change first and have a stake in the Paris Agreement is noteworthy. As an earlier idea for this thesis was to look for traces of environmental organizations' frames in news stories, I set out reading the material expecting to find actor-statements by representatives of environmental organizations, who might hold opinions about the significance of the Paris Accord, but found none. Granted, there are also no actor-statements by, say, representatives of the fossil fuel industry, although in one *FAZ* article an economic policy expert voices criticism of the Paris Agreement for economic and enforceability reasons.

One interpretation of this lack of activist voices could be that journalists who are already employing a *setback* frame for this issue do not believe it is necessary to reinforce the pro-climate change mitigation message with actor-statements by environmental organizations and rather include academic actor-statements for added clout, as discussed above.

I strongly believe that the inclusion of images in the analysis adds another layer of understanding of the media text as a unit. Wozniak et al. state that "visuals and text should be considered together as co-constructors of environmental narratives" that serve to dramatize environmental issues and "provide a kind of cognitive short cut compressing a complex argument into one that is easily comprehensible and ethically stimulating" (2014, p. 481). I argue that this

also applies to political-environmental topics like the subject of this study. Moreover, pictures have been shown to gain readers' attention and activate cognitive schemata present in the audience's minds faster than verbal text (Brantner et al. 2011, p. 526).

As an entry into the article, different photos of President Trump standing at a podium giving a speech appear four times in this sample, evoking any emotional responses connected to Trump as a person. Because they are accompanied by articles where the verbal text is framed in terms of *setback*, I venture to say that the images of Trump are expected to elicit mainly negative emotional responses, underlining the verbal *setback* frame on the visual level. The photos of the G7-heads of state as a group (FAZ1, FAZ11) casting Trump as an outsider – both the real-life version and the satirical exaggeration staged by Oxfam activists – emphasize the *setback* frame found in the verbal text by visualizing Trump's isolation from the other politicians who appear more oriented toward the future. The blame for stagnation or even reverse action is placed on Trump.

The two articles exemplifying the *no impact* frame are accompanied by photos that emphasize the verbal frame. I claim that the two photos (industrial structures in the center, smoke, and coal, respectively), while they do represent a condensation symbol for pollution and fossil fuels, are less dramatic and threatening than the photos in FAZ7, NYT2, and NYT5 with the same symbolic connotation. The blue-grey sky in the background, the lack of harsh backlight and darkness make the scene unimposing and normal, a visual expression of business-as-usual: yes, we are using fossil fuels and climate change exists, but there is no need to panic.

FAZ7, NYT2, and NYT5 lead with photos that show dramatic and ominous scenes serving as condensation symbols for fossil fuel use and pollution creating negative impacts on human life. These images underscore the articles' verbal framing in terms of *setback*, even if the photo in NYT5 in my opinion is not that easy to connect with pollution and climate change directly. It is also the only instance of *human interest* framing in this sample, as a photo of an individual civilian is seen to represent this frame (Brantner et al. 2011, p. 528).

A next step for further research would be to combine the content analysis of frames, actor-statements and visuals with an analysis of frame building and framing effects. As Matthes (2009) states, bridging several research areas – media production, content, and audience effects – is one strength of the framing approach (p. 351). In the environmental communication field, interesting studies have been done in the fields of frame production, for example Schlichting's (2013) study

on industry-sponsorship of climate change framing discussed above. Waisbord and Peruzzotti (2009) investigate how the news media shape the definition of environmental risks by framing the issues and actors, and how journalistic principles influence the coverage of citizens' movements advocating for environmental causes in Argentina. Anspach and Draguljić's (2019) work examines audience effects of mobilization communication frames commonly used by environmental organizations. They find different attitudinal and behavioral changes in the audience after exposure to different frames and explain which psychological mechanisms mediate these effects.

Visual framing effects have been studied by Brantner et al. (2009), albeit in the political/conflict news field. Utilizing Wozniak et al.'s (2014) multimodal approach combining frames, storytelling, and visuals seems especially worthwhile as it is suitable for quantitative studies of larger samples comparing across multiple countries.

However, at this point I am not aware of any work combining the three framing research areas in the environmental-political news sphere.

## 7. Conclusion

This study analyzed the content of news articles published on June 1<sup>st</sup>, 2017, in the *FAZ* and the *NYT* dealing with Donald Trump's announcement to withdraw the U.S. from the Paris Agreement. Answering *RQ1a: Which news frames are used?* we found that out of the five generic news frames as described by Semetko and Valkenburg (2000), the most frequently used frames were *economic consequences* (38 times), *conflict* (26 times), and *responsibility* (20 times). The *morality* frame appeared only twice, both in the *NYT*. The *human interest* frame was not evident in the verbal text at all, but occurred in one image in the *NYT*.

*RQ1b* asked *which issue-specific frames are used?* On the article level, two frames emerged inductively, the *setback* frame and the *no impact* frame. Entman's four building blocks of frames were addressed to define the frames and quotes were given to illustrate how the frames were found.

The images accompanying the articles were interpreted in clusters of photos with similar denotative content. They were shown to support the verbal issue-specific framing of the articles in the visual communication mode where an issue-specific frame was found, answering the first part of *RQ2: How can the images accompanying the articles and the actor-statements in the articles be interpreted in relation to the frames?*

Actor-statements, defined as direct or indirect quotes attributed to an external actor, were counted in each of the following categories: Donald Trump, domestic politician, international politician, policy expert, academic, and businessperson. Overall, most actor-statements were by international politicians, followed by Donald Trump, and domestic politicians. Academics, however, were only quoted in the *NYT* articles. This is assumed to have its cause in the historically different practices of reporting on the topic of climate change that created a biased representation of scientific facts due to including climate-skeptic voices in pursuit of journalistic balance, as shown by Boykoff and Boykoff (2004). Also, the more sustained influence of the industry-sponsored *scientific uncertainty* frame in the U.S. (see Schlichting 2013) might play a role in prompting journalists to include academic statements. Thus, the similar number of actor-statements in some categories and the differences in others give the most interesting openings for interpretation. The absence of other actor-statements, specifically activist or environmental organizations, is also notable.

Although no clear relation could be found connecting certain categories of actor-statements with the presence of a certain frame, including them in the analysis proved useful as it added information that might otherwise have been overlooked had one only focused on framing.

Comparing an American and a German outlet in this study, I found that there are many similarities regarding the selection of reported events leading up to or otherwise connected to the main event in question (Trump's withdrawal from the Paris Agreement), actor-statements by politicians, and studies cited. Although we are only looking at a limited number of articles published on one day about a specific topic, I believe that these similarities are an indication of a globalizing news flow. That journalists then – in just a few instances in the present sample – sometimes make something quite different out of the same piece of information makes international comparison even more worthwhile. As consumers of news, we are reminded that frames not only play a role when the journalist produces content, but also exist in the audience's minds.

If we agree that the globalization of news is happening, political-environmental news topics like the one discussed in this study should be a prime example of this, since it is about a political decision by a leader in one country that affects an international agreement that many countries are a part of, addressing climate change mitigation which is a global concern. And yet, most of the German articles also support the opposite argument, that there is a tendency to domesticate foreign news, given the emphasis on Angela Merkel's reaction to Trump's decision and the inclusion of more statements by other domestic political actors.

I believe the similarities are greater than the differences, with the majority of articles being framed in terms of *setback*. In this we might also see an indication that a kind of development journalism exists, engaging in community-building for climate action, as Robertson mentions (2015, p. 67).

In some articles in this study, I argue that there are instances of what Berglez calls global journalism, a journalistic style that takes a “global outlook” and which seeks to “explain how economic, political, social and ecological practices, processes and problems in different parts of the world affect each other [...]” (2008, p. 847).

Some of China's emissions are from the production of goods for the United States and other rich countries. (NYT4)

Above is an example of the journalist explaining how production and consumption of goods and the resulting emissions that accelerate climate change should be understood as globally interconnected processes. Also, the only *human interest* framed text in this sample, the image of the Mongolian steel worker (NYT5), can be interpreted as an instance of global journalism in Berglez' sense.

If what we can learn from this project is that tendencies of global journalism are becoming more visible in the mainstream media, I am hopeful that topics involving politics and the environment can be communicated more effectively to the public in the future.

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## Appendix

Table 1 – News Frames indicators and Incidences per article

<b>Frame</b>	<b>Indicators</b>	<b>FAZ article where present (number of paragraphs)</b>	<b>NYT article where present (number of paragraphs)</b>	<b>Total number of paragraphs where frame is present</b>
<b>News-Conflict</b>	‘against’ ‘defy’ ‘challenge (another entity)’ ‘rebuke’ ‘condemn’ ‘oppose’ ‘threaten’ ‘differences’	FAZ1 (2) FAZ2 (1) FAZ4 (4) FAZ7 (1) FAZ8 (3) FAZ9 (2) FAZ10 (2) <b>TOTAL 15</b>	NYT1 (7) NYT3 (2) NYT5 (2) <b>TOTAL 11</b>	<b>26</b>
<b>News-Human interest</b>				
<b>News-Economic consequences</b>	‘economic opportunity’ ‘economic prosperity’ ‘growth’ ‘financing’ ‘funding’ ‘poor’ ‘cost-efficiency’	FAZ1 (1) FAZ2 (6) FAZ3 (4) FAZ4 (2) FAZ5 (1) FAZ6 (3) FAZ7 (1) FAZ8 (1) FAZ9 (1) FAZ11 (1) <b>TOTAL 21</b>	NYT1 (5) NYT2 (2) NYT3 (2) NYT4 (5) NYT5 (3) <b>TOTAL 17</b>	<b>38</b>
<b>News-Morality</b>	‘moral’ ‘immoral’		NYT2 (1) NYT4 (1) <b>TOTAL 2</b>	<b>2</b>
<b>News-Responsibility</b>	‘responsibility’ ‘duty’ ‘obligation’ ‘blame’ ‘own the problem’	FAZ1 (1) FAZ2 (2) FAZ3 (2) FAZ4 (2) FAZ7 (4) FAZ10 (1) FAZ11 (2) <b>TOTAL 14</b>	NYT1 (1) NYT2 (1) NYT4 (3) NYT5 (1) <b>TOTAL 6</b>	<b>20</b>

Table 2 – Actor-Statements

<b>Actor-statement Type</b>	<b>Criteria</b>	<b>FAZ article where present (number of mentions)</b>	<b>NYT article where present (number of mentions)</b>	<b>Total number of mentions</b>
<b>Actor-statement Donald Trump</b>	Quoted in direct or indirect speech	FAZ1 (1) FAZ3 (4) FAZ4 (2) FAZ5 (2) FAZ6 (1) FAZ7 (1) FAZ8 (1) FAZ10 (2) FAZ11 (1) <b>TOTAL 15</b>	NYT1 (8) NYT2 (3) NYT3 (2) NYT4 (2) NYT5 (3)  <b>TOTAL 18</b>	<b>33</b>
<b>Actor-statement-Politician domestic (not Donald Trump)</b>	Quoted in direct or indirect speech	FAZ1 (2) FAZ2 (1) FAZ3 (4) FAZ4 (5) FAZ8 (2) FAZ9 (2) <b>TOTAL 16</b>	NYT1 (5)  <b>TOTAL 5</b>	<b>21</b>
<b>Actor-statement-politician international/UN (not Donald Trump)</b>	Quoted in direct or indirect speech	FAZ1 (2) FAZ2 (1) FAZ3 (2) FAZ4 (5) FAZ5 (1) FAZ7 (2) FAZ8 (3) FAZ9 (1) FAZ10 (3) FAZ11 (1) <b>TOTAL 21</b>	NYT1 (3) NYT5 (19)  <b>TOTAL 22</b>	<b>43</b>
<b>Actor-statement-Policy expert/think tank/other</b>	Quoted in direct or indirect speech	FAZ2 (3)  <b>TOTAL 3</b>	NYT3 (1) NYT4 (1) NYT5 (2)  <b>TOTAL 4</b>	<b>7</b>
<b>Actor-statement-Academic</b>	Quoted in direct or indirect speech	<b>TOTAL 0</b>	NYT3 (3) NYT4 (2) NYT5 (2) <b>TOTAL 7</b>	<b>7</b>

Table 3 – Article List with Lead Images

*New York Times (NYT)*

Number	Title	Lead	Image	Journalist
NYT1	Trump Will Withdraw U.S. From Paris Climate Agreement <a href="https://www.nytimes.com/2017/06/01/climate/trump-paris-climate-agreement.html">https://www.nytimes.com/2017/06/01/climate/trump-paris-climate-agreement.html</a>	The withdrawal process could take four years to complete, meaning a final decision would be up to the American voters in the next presidential election.		Michael D. Shear
NYT2	The Paris Climate Deal: What You Need to Know <a href="https://www.nytimes.com/2017/06/01/climate/paris-climate-change-guide.html">https://www.nytimes.com/2017/06/01/climate/paris-climate-change-guide.html</a>	President Trump's decision to exit the climate pact is a setback for the worldwide effort to combat global warming. Here's a guide to what it means.		Jonathan Ellis
NYT3	What to Expect as U.S. Leaves Paris Climate Accord <a href="https://www.nytimes.com/2017/06/01/climate/us-paris-accord-what-happens-next.html">https://www.nytimes.com/2017/06/01/climate/us-paris-accord-what-happens-next.html</a>	Other nations will most likely continue to pursue clean energy policies while the United States is sidelined in international talks.	None	Brad Plumer
NYT4	The U.S. Is the Biggest Carbon Polluter in History. It Just Walked Away From the Paris Climate Deal. <a href="https://www.nytimes.com/interactive/2017/06/01/climate/us-biggest-carbon-polluter-in-history-will-it-walk-away-from-the-paris-climate-deal.html">https://www.nytimes.com/interactive/2017/06/01/climate/us-biggest-carbon-polluter-in-history-will-it-walk-away-from-the-paris-climate-deal.html</a>	The United States has emitted more planet-warming carbon dioxide into the atmosphere than any other country. Now it is walking back a promise to lower emissions.		Justin Gillis and Nadja Popovich
NYT5	As Trump Exits Paris Agreement, Other Nations Are Defiant <a href="https://www.nytimes.com/2017/06/01/world/europe/climate-paris-agreement-trump-china.html">https://www.nytimes.com/2017/06/01/world/europe/climate-paris-agreement-trump-china.html</a>	Rich and poor countries alike said they were sticking to the climate accord, with or without the United States.		Somini Sengupta, Melissa Eddy, Chris Buckley and Alissa J. Rubin

Table 3 – Article List with Lead Images (continued)

*Frankfurter Allgemeine Zeitung (FAZ)*

Number	Title	Lead	Image	Journalist
FAZ1	Keine Neuverhandlung von Paris Europa erteilt Trump eine Absage	Amerika verlässt das Klimaabkommen. Die Regierungschef Deutschlands, Frankreichs und Italiens reagieren darauf mit einer gemeinsamen Erklärung.		N/A
FAZ2	Schwachstellen im Klimavertrag Betriebsunfall von historischer Tragweite	Der Klimavertrag von Paris hat Schwachstellen. Selbst ohne den Ausstieg der Vereinigten Staaten droht er zu scheitern. Die Aussichten sind ernüchternd		Andreas Mihm
FAZ3	Wegen Kosten und Jobs Trump verkündet Amerikas Rückzug aus Klimaabkommen	Amerika wird aus dem Klimaschutzabkommen von Paris aussteigen. Das sagte Präsident Donald Trump am Abend in Washington. „Das Abkommen ist sehr unfair für Amerika“, begründete Trump seinen Schritt.		N/A
FAZ4	Li bei Merkel China will weiter zum Klimaschutz stehen	Trotz des drohenden Ausstiegs der Vereinigten Staaten aus dem Klimaschutzabkommen will China den Kampf gegen die Erderwärmung fortsetzen. Bei seinem Besuch in Berlin bekennt sich Präsident Li auch zu einem freien Welthandel.		N/A
FAZ5	Bei Austritt aus Klimaabkommen Elon Musk droht mit Ende seiner Beratertätigkeit	Viele amerikanische Unternehmenslenkersind für das Pariser Klimaabkommen. Einer droht nun mit Konsequenzen, sollte Donald Trump wie erwartet aussteigen.		Ala.

Table 3 – Article List with Lead Images (continued)

*Frankfurter Allgemeine Zeitung (FAZ)*

FAZ6	Nach Trumps Entscheidung Warum der Austritt aus dem Klimaabkommen kaum Folgen hat	An der Klimabilanz der Vereinigten Staaten dürfte Trumps Ausstieg nicht viel ändern. Sie hängt vor allem von zwei anderen Entwicklungen ab.		Winand von Petersdorff
FAZ7	China und das Klima Vom Buhmann zum Musterschüler	Egal, wie sich Trump zum Pariser Klimaabkommen stellt: Der Wirbel um Amerika nutzt China. Das Riesenreich kann von eigenen Sünden ablenken		Petra Kolonko
FAZ8	Klimaabkommen Alle gegen Trump	Heute Abend verkündet Donald Trump seine Entscheidung. Tritt Amerika aus dem Klimaabkommen aus? Warum Trump dann nicht nur Staaten, Unternehmen und Wissenschaftler gegen sich hätte – sondern auch das eigene Volk.		Hanna Decker
FAZ9	Besuch aus Indien und China in Berlin Schwenkt Merkel nach Asien?	Der Westen bleibt der Kanzlerin am nächsten. Doch Donald Trump sollte sich keiner Illusion hingeben. In Fragen der Klima- und Handelspolitik schmiedet Deutschland gerade fleißig neue Allianzen. Mit China und Indien.		Lohe.
FAZ10	Pariser Abkommen Trump will sich zu Klima am Donnerstag äußern	Am heutigen Donnerstag will Trump seine Entscheidung zum Klimaabkommen verkünden. Amerikanische Medien berichten über einen bereits beschlossenen Ausstieg. Die EU-Kommission wartet in letzter Minute.		N/A
FAZ11	Klimaabkommen Warum es auch ohne Amerika weitergeht	Der amerikanische Präsident Trump wird möglicherweise heute Abend ankündigen, das Pariser Klimaabkommen zu verlassen. Doch den Klimaschutz kann er nicht aufhalten – nicht einmal in Amerika.		Hanna Decker

Table 4 – Denotative Content of Images

Article#	Caption	Title image - denotative visual content
FAZ1	Beim Klimaschutz schauen sie nicht mehr in dieselbe Richtung: Merkel, Gentiloni (Zweiter von rechts) und Macron (links) mit Trump (daneben) beim G7-Gipfel.	Photo of Merkel, Gentiloni, Macron, Trump, and May that appears to be taken from the side as they position themselves for a photo. Everyone is looking in the same direction except for Trump.
FAZ2	Die noch festzulegenden CO2-Mengenziele sind strittig. Ökonomen fordern deshalb andere Strategien.	Photo of industrial buildings and chimneys against a mostly clear blue sky, a large white plume of smoke or water vapor emanating from the tallest chimney. Silhouette of a tree in the background.
FAZ3	Donald Trump vor dem Weißen Haus	Photo of Donald Trump standing at a podium in front of the White House. He is speaking and extending his hands in front of him. There is an American flag in the background.
FAZ4	Will weiter gegen die Erderwärmung kämpfen: der chinesische Ministerpräsident Li Keqiang am Donnerstag mit Kanzlerin Merkel in Berlin	Photo of Li Keqiang and Angela Merkel standing or sitting side by side during a conversation. They are facing each other and Li is gesturing with his hands. A European and German flag are in the background.
FAZ5	Elon Musk im Januar im Trump Tower in New York.	Photo of Elon Musk, wearing a suit and red tie. Showing only the chest and head from a side angle, he appears to be walking.
FAZ6	Kohle-Verladehafen im Bundesstaat Ohio	Photo of an industrial steel structure standing on a hill of black stones against a blue sky with big grey clouds.
FAZ7	Wer soll da den Durchblick behalten? Smog in Peking	Photo of a six-lane road with cars coming towards the camera and thick grey smog that obscures the cars in the distance. The background is a grey haze.
FAZ8	Donald Trump lässt die Welt warten.	Photo of Donald Trump speaking into a microphone and gesturing. Frame is from chest up. There is a part of a U.S. flag visible in the background, so it looks like he is standing behind a podium.
FAZ9	Empfang mit militärischen Ehren: Angela Merkel und Le Keqiang vor dem Berliner Kanzleramt.	Photo of Angela Merkel and Li Keqiang being saluted by a military person. The photo is taken from an overhead angle behind Merkel and Li, as they are standing on a red carpet, only their upper bodies and heads showing at the lower left edge of the frame, their faces are not visible. At the right edge of the frame there is a line of military personnel in uniform. The middle ground of the photo, taking up most of the space, shows the grey stone pavement.

Table 4 – Denotative Content of Images (continued)

FAZ10	Der amerikanische Präsident Donald Trump	Photo of Donald Trump, showing only the head and neck, a microphone is in front of him. In the foreground, blurred flowers and leaves. Trump is wearing a suit and a blue tie, giving the impression that he is probably giving an official address. The background is white, but the flowers in the foreground indicate that it might be in the Rose Garden.
FAZ11	Wie geht's weiter? Oxfam-Aktivisten in Taormina, Italien	Photo of people wearing oversized masks portraying the leaders of the G7 states are carrying suitcases and heading in the direction of the Paris Agreement, written on an arrow sign. The Donald Trump-figure is sitting on his suitcase and the Angela Merkel-figure is gesturing towards him. The 'Oxfam' logo and name are displayed in the foreground.
NYT1	Brad Plumer, a climate reporter for The New York Times, explains the consequences of President Trump's decision today that he will withdraw from the landmark global warming agreement. Credit: Doug Mills/The New York Times	Photo of Donald Trump standing at a podium, probably in the Rose Garden during the announcement. Perspective: full figure shot from the side. Background: vegetation, and further away two security guards.
NYT2	An oil refinery in Marcus Hook, Pa. The United States is the biggest carbon polluter in history. Credit: Luke Sharrett/Bloomberg	Photo of a landscape with chimneys, trees, and a bridge against a grey sky, a big smoke plume backlit by the sun emanating from one of the chimneys.
NYT4	none	Four graphs of CO2 emissions, comparing the U.S. to the EU, India, and China between 1850 and 2014.
NYT5	An unauthorized steelplant in the northern Chinese region of Inner Mongolia. The Paris Agreement calls on just about every country to take measures to address climate change. Credit: Kevin Frayer/Getty Images	Photo of a fire on a hill of earth and rubble burning bright against a night sky. A person standing in front of the fire, holding a shovel, wearing dark clothes, safety glasses, and brimmed headgear, but no professional protective wear. Another fire burning bright in an open oven-like structure, sparks flying. Shabby-looking makeshift buildings in the background, wooden poles and corrugated iron plates.