

Counterbalancing Global Media Frames with Nationally Colored Narratives:

A Comparative Study of News Narratives and News Framing in the Climate Change Coverage of Five Countries.

Julia Lück (University of Mainz), Hartmut Wessler (University of Mannheim), Antal Wozniak (University of Exeter), and Diógenes Lycarião (Federal University of Ceará)

Corresponding author

Julia Lück, Department of Journalism, Johannes Gutenberg-University of Mainz, Alte Universitätsstraße 17, 55116 Mainz, Germany

Email: jlueck@uni-mainz.de

Author Biography

Julia Lück is a research associate in the Department of Journalism at the Johannes Gutenberg-University of Mainz, Germany. She received her master's degree at the University of Mannheim in 2012 and worked in the project "Sustainable Media Events?" (funded by the German Research Foundation) at the Mannheim Center for European Social Research (MZES) until 2016. Her research focuses on political communication, journalism studies, comparative research in international and transnational settings, as well as mediated deliberation. Her academic writings have been published in *International Journal of Press/Politics*, *Journalism Studies*, and *Environmental Communication*.

Hartmut Wessler is Professor of Media and Communication Studies at the University of Mannheim, Germany, and a member of the Mannheim Center for European Social Research (MZES). His research focuses on the comparative analysis of political communication as well as on transnational communication, particularly focusing on the issue of climate change. Hartmut Wessler is the author of *Öffentlichkeit als Prozess [The Public Sphere in Processual Perspective]* (Westdeutscher Verlag, 1999) and co-author of *Transnationalization of Public Spheres* (Palgrave Macmillan, 2008) and *Transnationale Kommunikation* (Springer VS, 2012). His work has appeared in *Journal of Communication*, *Communication Theory*, *Political Communication*, *The International Journal of Press/Politics*, among others.

Antal Wozniak is a Research Fellow in the Department of Politics at the University of Exeter. His research interests include issue framing and visual representations of climate change in media coverage as well as the role of interest groups in democratic decision making. His academic writings have been published in *International Journal of Press/Politics*, *Journalism Studies*, and *Environmental Communication*.

Diógenes Lycarião is an Assistant Professor at the Institute of Culture and Arts, Federal University of Ceará (ICA-UFC). He has obtained his Ph.D. in 2014 from the Federal University of Minas Gerais (UFMG). In 2013, he worked as Guest Researcher (Capes/DAAD

Fellow) at the Mannheim Centre for European Social Research (Mzes) and between 2014 and 2015 as a postdoctoral scholar at the Post Graduate Program in Communication, Fluminense Federal University (PPGcom-UFF). Currently he is leading a research project on news engagement in Facebook.

Funding

The paper presents results from the project “Sustainable media events? Production and discursive effects of staged global political media events in the area of climate change” which was funded by the German Research Foundation (DFG, Deutsche Forschungsgemeinschaft).

Counterbalancing Global Media Frames with Nationally Colored Narratives:

A Comparative Study of News Narratives and News Framing in the Climate Change Coverage of Five Countries.

Abstract

This study disentangles national and transnational influences on international journalism by distinguishing convergent issue framing from nationally specific narrative in news texts. In a comparative quantitative content analysis of the newspaper coverage in five democratic countries (Brazil, Germany, India, South Africa, and USA) during four UN climate change conferences from 2010 to 2013 both textual-visual framing and narrative features were studied simultaneously for the first time. The narrative dimension consisted of variables that gauge (a) the degree of narrativity in an article, (b) the type of narrative (i.e. stories of catastrophe, conflict, success etc.), and (c) narrative roles of victims, villains and heroes. Hierarchical cluster analysis was used to identify both the prevailing issue frame in an articles and its dominant narrative.

Results show that issue frames converge more strongly across countries while narratives are more closely related to the cultural context and political particularities of each country. Investigating issue frames and narratives concurrently helps to reveal country-specific patterns of narrative coloring even for the same issue frame.

Keywords

Narrative journalism, issue framing, comparative research, content analysis, climate change

The development of journalism is closely connected to the political and cultural reality in which it is rooted. To describe the concrete shapes that journalistic systems acquire the term “journalism cultures” is frequently used (Hanitzsch, 2007). It includes the journalistic practices, professional standards, and ethical aspects that have traveled along different historical trajectories in different countries over time (Esser and Umbricht, 2014; Zelizer, 2010).

However, on the level of journalists’ professional culture Mancini (2008) also notices a (global) trend of homogenization. Reese (2008: 241) recognizes a convergence of professional identification within journalism that is expressed in shared norms and values, in order to “adapt to the needs of a more globalized system.” Research on journalism culture, therefore, needs to carefully disentangle transnationalizing and (re)nationalizing tendencies as they play out in journalistic practice and products in order to better understand ongoing developments of global diffusion and interdependences in journalism (see Hanitzsch, 2007)

The research presented in this paper aims at contributing to this effort by detecting and explaining similarities and differences in the media coverage of climate change, one of the pressing issues of our times, across culturally diverse countries. The easiest way to distinguish convergent features of news coverage from cultural particularities is to study media coverage of the same globally accessible event in vastly divergent contexts (e.g. Krøvel, 2011; Kunelius and Eide, 2012). We do this by comparing newspaper coverage in democratic countries on each of the five major continents (Brazil, Germany, India, South Africa, and the USA) about the United Nations Climate Change Conference (Conferences of the Parties – COPs) held annually under the auspices of the United Nations Frame Convention of Climate Change (UNFCCC). Our approach to the issue of cross-national convergence versus national particularities contrasts the *issue frames* conveyed in this coverage with the *narratives* in which this coverage is embedded. We argue that issue frames may be more similar across countries than narratives. While the former are likely to be shaped by the global governance setting of the COPs and the

onsite co-production of messages by journalists and spokespeople (Lück, Wozniak, Wessler, 2015), we expect narrative features of news items to tap into larger, culturally resonant meta-narratives prevalent in the respective national context of a newspaper.

In doing so, we follow Shen et al. (2014: 100) who argue: “While news frames are the central organizing ideas that serve to provide meanings on issues and events, narratives in the news can be viewed as the rhetorical structures or stylistic devices that allow newsmakers to effectively communicate the frames.” Tenenboim-Weinblatt et al. (2015: 3) view narratives as the higher discursive concept which combines and connects frames. Krøvel (2011: 92) shows, on the basis of work by Allern (2008), what it is in particular that narratives add to framing: “Journalists tend to embed their stories within culturally-bound narratives, recognizable to the audience, so that new information is formulated as new episodes in a longer and familiar story.” This implies that narratives within the journalistic texts are more closely connected to their respective cultural backgrounds than frames, especially in the coverage of such global political media events like the COPs. Our paper aims at providing an empirical analysis to test these considerations after spelling out the theoretical argument further and elucidating characteristics of narratives and frames and clarify the relation of these two communicative modes. Our investigations will also provide more detailed explorative and interpretative insights about the use of narrative elements and frames within the news coverage of climate change.

Characterizing Journalistic Narratives

We propose to characterize journalistic news narratives according to three dimensions: the degree of narrativity, the type of story being told, and the constellation of narrative roles such as victims, villains, and heroes.

The **degree of narrativity** can be gauged by registering four narrative characteristics that a news text may contain. These refer to the particular form that is decisive for narratives, e.g. a sequential arrangement (Hinyard and Kreuter, 2007), or a plot that consists of a series of events

and actions around a moment of conflict (McComas and Shanahan, 1999). Zerba (2008) distinguishes narratives in the journalistic context from factual news by highlighting the former's sequence-of-events plot and contrasting it to the traditional inverted pyramid style of the classical news story that presents the most important facts first, adding less important details and background information afterwards. Glaser et al. (1999) also emphasize that narratives are characterized by the convention of a story grammar that connects events in a dramatic account (*dramatization*). Beyond that, they highlight the presentation of events in an emotional way (*emotionalization*), a plot that focuses on agents (mostly humans) causing events (*personalization*), and the inclusion of fictional or hypothetical episodes (*fictionalization*) as important formal characteristics of narratives. We acknowledge these four characteristics as important attributes for distinguishing narrative news from other forms but, following Wolfe (2002), we also suggest the narrative concept to be understood as gradual, especially against the background of the diversity of possible formats within newspapers (editorial, op-ed, feature, interview, etc.). In practice, this means for us that the four narrative elements can be more or less distinctive within an article, which therefore can have a smaller or greater degree of narrativity depending on the actual appearance of these elements. Articles can, for example, feature sequential paragraphs presenting the action and motives of an actor, but otherwise follow the inverted pyramid style. Emotions may be displayed or not in an article that otherwise focuses around an actor causing events. The more such formal elements are manifested in a news story the higher is its degree of narrativity as they would add up to one another.

Moving to the content level, we can characterize news narratives by their **story type**, that is, the kind of story that is actually told. Following Roeh (1989: 608), storytelling is actually the essence of journalism even if many journalists would probably spontaneously reject this notion because of an underlying assumption that storytelling contradicts the common norm of “objectivity”. Schudson (2012: 171) pursues a quite similar approach by stating: “A news story is both news and a story.” What kind of story is told in particular can be revealed with the help

of narrative genre theory (Schwarze, 2006; Smith 2012). The overall theme, the general tone and the outcome envisioned for the story combine in determining the ideal-typical story types, e.g. comedy or tragedy or other, more hybrid forms.

We also want to stress that personalization is particularly decisive for narratives (Barthes, 1975). Franzosi (2010: 21) highlights the connection between events, actions, and characters, for there has to be some kind of action for an event to take place and “without characters there can be no action.” Most commonly, such agents within narratives are displayed in specific **narrative roles**, typically in a constellation of victim, villain, and hero (Schwarze, 2006; Smith, 1997), that can “provide culturally familiar templates and can generate dramatic effect” (Higgins and Brush, 2006: 700). For the purpose of determining the narratives that are told in the news coverage it is therefore necessary to identify those actors that are decisive for the story to unfold.

Delimiting Framing in Relation to Narration

Since both narration and framing are central communicative modes in news discourse we need to distinguish them from each other conceptually for analytical purposes (Wozniak, Lück & Wessler, 2014). Framing analysis emphasizes selectivity of information and implies more or less conscious communication strategies by “frame sponsors” (Gamson & Modigliani, 1989). Framing entails an interpretative moment because it organizes and structures discrete elements in order to make sense of relevant events and to suggest what the issue at hand actually means (Gamson and Modigliani, 1989: 3). That makes frames “patterns of interpretations“ (Brüggemann, 2014: 63). More specifically, Entman (1993: 52) defines four layers or elements of a frame: “a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item describe.”, which also facilitates the operationalization and intersubjective coding of the concept in media content analyses (Matthes and Kohring, 2008).

Our understanding of framing also includes visual elements that accompany a text in the media coverage (Wozniak, Lück & Wessler, 2014; Wozniak, Wessler & Lück, 2016). Here again, certain objects are chosen for depiction while others are left out, which contributes to the overall framing found in an article.

Focusing on selectivity does not yet clarify how all these pieces of information given through the framing of an article are (formally) connected to each other. Information can be ordered in different ways. It can be presented in the style of an inverted pyramid or in sequential order as in a classic narrative¹. It may or may not contain other narrative elements such as the presentation of emotions or narrative personalization which would make an article more or less narrative in its form. For Tenenboim-Weinblatt et al. (2015), this is what makes frames “less accommodating than narratives” (2). While frames provide the information for a basic interpretative framework, narratives add complexity and reveal the temporal order of events (ibid.). This argument is supported by the considerations made by Shen, Ahern and Baker (2014) regarding the relationship between narratives and framing. By and large, the authors emphasize the unique criterion for narratives to be complete stories consisting of characters, a plot, and causal relationships. While the concept of framing concentrates more on the argumentative elements, narrations provide for the cultural resonance and meaning construction perception.

At the content level, frame elements are used as pieces to tell a certain story, such as a comedy or a drama. The story that is told in this way also influences the frame elements that are chosen to be communicated. A story told as a tragedy certainly emphasizes other elements of an event than a satire. However, (more or less the) same pieces of information (frame elements) could also be used for different narrations, e.g., when the story of climate change (with frame elements that emphasize rising temperature, human responsibility, and several

¹ Many other forms are conceivable, but cannot be further regarded at this point due to space limitations.

consequences) is told as an apocalyptic scenario with no hope or as a struggle that can collectively be fought and won. The construction of framing and narration within a news text is nevertheless not one-sidedly determining. Instead, one should consider the relationship between framing and narration as dynamic and non-deterministic. Neither in production nor in reception is there a preset chronology that would define the frame first and then choose the form and storyline in which the frame elements are presented. Instead, a particular narrative can inflect the framing since the narrative needs particular informational elements rather than others to function as a story.

Diverse Levels of Influence on Framing and Narratives

In this paper we aim at identifying and explaining characteristic combinations of frames and narratives in the coverage of the global climate change conferences. It is unclear, however, to what degree such combinations are uniform across the very different countries we study here. Global trends as well as culturally specific influences shape the coverage in a country.

Trends of homogenization in journalism are mainly pushed by technological developments and common trends of professionalization. Reese (2008) identifies a global news arena in which journalists need to navigate and to which they adapt: “In these settings, operating with the same equipment, access, and need for instantaneous transmission, technology has unified news routines even across organizations operating out of widely different national contexts.” (Reese, 2008: 245) Hanitzsch (2008: 205) points to some similarities in the journalistic orientation and practices that become manifest in a universal transnational layer of journalism culture characterized by diffusion and interdependences. The Anglo-American journalism ideal of objectivity has continuously gained influence in journalism all over the world (Hanitzsch, 2007; Kaplan, 2012) and is closely connected to the rise of the inverted pyramid style of newswriting (Ytreberg, 2001). Beyond such trends, Curran et al. (2015) convincingly demonstrate that foreign news can converge across different countries due to the dominance of

a small number of news agencies, the hegemony of market liberal convictions and a shared belief system in historically associated countries.

On the other hand, journalism cultures are also characterized by the sum total of the adjustments that journalists and media producers make (and have made historically) to the social and political systems they operate in. Both trends, global convergence and national particularities, can be analyzed together in a transcultural approach to comparing journalism practice and output in order to avoid imagining cultural and social processes as self-contained processes within national “containers” (Hepp, 2008).

In order to sort out global as well as culturally specific developments, we analyze narratives and frames concurrently. The COPs are important occasions with a global news value at which journalists from around the world share the same reference point and mainly work in the same settings (i.e., having access to the same official information and people, to press conferences, and events onsite the conference). Within this setting, journalists are confronted with actors and interest groups that all try to communicate their particular interpretations and gain public attention. It seems very likely that media framing converges to a certain extent in this setting and that there are common framing patterns that can be observed across countries. At the same time, we assume that cultural adaptation of such transnational framing is facilitated through the use of particular types of stories in order to connect with the respective audience in a way that fits into their cultural perception. We therefore hypothesize:

H1: The narrative story types used in COP coverage will be more distinct between countries than the issue frames applied.

H2: A particular issue frame will be combined with different story types in different countries, reflecting country-specific patterns of narrative coloring even for the same issue frame.

Research Design

We applied a comparative research design and conducted a quantitative content analysis of the media coverage in five countries about the UN climate change conferences. The countries in our sample – Brazil, Germany, India, South Africa, and the USA – were chosen because they represent important democratic countries and influential economic players (Germany and US as major Western economies, Brazil, India and South Africa also as important emerging countries, which also engage in the BRICS-alliance) in each of the major continents. They do not only act at the international political stage but also ensure basic rights at the domestic level that are necessary for a free media discourse. All five countries actively engage in the climate change conferences representing different interests and positions). Beyond that, these five countries exhibit diverse historical backgrounds, stages of economic development, and cultural traditions. We therefore expect culturally-sensitive news narrative to vary substantially across our country sample.

For our media sample, we selected nationally distributed and widely-read daily newspapers² from Brazil (*Folha de São Paulo*, *O Globo*), Germany (*Süddeutsche Zeitung*, *Frankfurter Allgemeine Zeitung*), India (*Times of India*, *The Hindu*), South Africa (*Daily Sun*, *The Star*) and the United States of America (*The New York Times*, *The Washington Post*). Our sampling periods comprised November 22 to December 19, 2010 for the climate change conference in Cancún, Mexico (COP 16), November 28 to December 14, 2011 for Durban, South Africa (COP 17), November 19 to December 4, 2012 for Doha, Qatar (COP 18), and 4 November to 30 November, 2013 for Warsaw, Poland (COP 19).

² We focused on daily print newspapers as quality opinion-leading papers that devote constant levels of attention to the topic of climate change during the COPs and are widely read by political and business elites as well as journalists in their respective countries. Since the form and structure of a daily newspaper is quite consistent across countries, cross-national comparability of media content largely undiluted by differences in medium-specific forms of presentation could also be ensured.

An extensive coding instrument was developed that covers textual and visual framing elements as well as narrative characteristics³. A more detailed theoretical derivation and description of all operationalizations as well as a complete presentation of pretest results for all variables and all countries separately was published in Wozniak, Lück and Wessler (2014)⁴.

Our complete media sample contained 1,311 articles. The main unit of analysis is the single article, which was coded for formal categories and for narrative characteristics⁵. Visual elements were coded separately because an article could carry more than one visual or none at all. Below the level of the article, we coded all actor-statements (including statements of the article's authors, mostly journalists) for the presence or absence of a predefined set of text-based climate-change-related frame elements (n=5,561). Frame elements were coded according to Entman (1993)⁶ on the dimensions of *problem definition* (here: consequences of climate change, such as increases in temperature, melting ice/glaciers, etc.), identification of *causes* (e.g., greenhouse gas emissions, deforestation), and *treatment recommendations* (remedies, such as clean energy, financial assistance to disadvantaged countries etc.).⁷

³ The complete codebook is available at the online appendix [URL omitted for anonymity].

⁴ For textual frame and image content variables, intercoder reliability reached at least a .70 level with either Brennan and Prediger's kappa or Krippendorff's alpha in our final pretest that was performed on random samples of 76 textual articles and 91 visuals. Intercoder reliability is somewhat lower for the narrative variables with all variables achieving a .55 level in either kappa or alpha and all but four variables reaching at least .60. Some narrative variables worked better in some countries than others, depending on the cultural familiarity of the coders with the country under study as well as the level of overtness of narrative features in the newstext studied. Even though there is room for improvement in future studies, due to the innovative nature of our standardized narrative analysis we deem the level of intercoder reliability achieved in this study generally acceptable.

⁵ Narrative elements were not coded for interview-articles that were published in a question-and-answer style. Therefore, the narrative sample only includes n=1,236 articles.

⁶ The frame element data were later aggregated onto the article level using dummy variables (0 = frame element absent in article, 1 = frame element present in article) so that they could be combined with the visual and narrative data in detecting issue frames and combinations of frames and narratives.

⁷ Due to a lack of positive evaluations of climate change (such as an outright denial of any problematic consequences or a highlighting of economically beneficial ramifications), which we did not find during the development and testing of the coding instrument, we did not include Entman's category of "moral judgement" in our analysis. The only moral evaluations that could be singled out as such were the ascriptions of responsibility for climate change to countries or groups. But since this measure cannot be separated from the identification of causes we decided to exclude it from the analysis and use it as further context information for interpretations.

Elements within the visual material were coded on a denotative level. We recorded depictions of different types of actors relevant to the climate debate; if possible, we also coded their origin and the activity that was displayed. Further variables recorded displays of environments, flora and fauna, technological objects or infrastructure, as well as PR stunt installations by environmental NGOs.

Narrative elements were coded on the three dimensions mentioned earlier *degree of narrativity*, *story type*, and *narrative roles*. To account for the idea of narrativity as a gradual concept the degree of narrativity was operationalized as an additive index which consists of four variables that were coded for their presence or absence at article level: *dramatization*, referring to a structure that is more sequential rather than inverted-pyramid style, *emotion*, where emotions were explicitly expressed in the text, *narrative personalization*, referring to actors that cause actions or are effected by the actions of others, and *fictionalization*, referring to anecdotal or speculative details added to the text. The story type dimension consisted of three variables: *overall theme* (failure after struggle, social/ political conflict, triumph over adversity, struggle over destiny or everyday business), *tone* (optimistic, pessimistic, fatalistic, unexcited/ neutral or passionate) and *outcome* (conflict fixed, conflict not fixed or no conceivable outcome). For the narrative roles it was possible to code one *hero*, one *victim* and one *villain* per article and define the type of actor (individual, organizational, or institutional), the name as stated in the text, as well as the type of action attributed to the actor⁸.

Results

Degree of Narrativity

⁸ Since it is rather uncommon to analyze narrativity with a standardized coding instrument, coder training and the coding routine itself were intensive processes in which coders were given detailed theoretical background information about the concept of narrativity and the difficulties to investigate it with a comparative approach. Cultural sensitivity was trained in group discussions in which texts were compared to detect equivalences and in which subjective interpretations were balanced and adjusted. Uncertain cases were collected and also discussed in team meetings throughout the coding process.

The degree of narrativity was calculated as an additive index from the four binary variables capturing narrative text features (dramatization, narrative personalization, emotion, and fictionalization). The index ranges from 0 = no narrativity to 4 = strong narrativity. A mean comparison between countries shows noteworthy differences ($F(4,1271) = 12.38^9$) with Brazil having the highest degree of narrativity ($M=1.72$; $SD=1.17$) followed by Germany ($M=1.34$; $SD=1.08$), the US ($M=1.31$; $SD=0.99$), South Africa ($M=1.22$; $SD=0.94$) and India ($M=1.15$; $SD=0.97$). This seems plausible with respect to journalistic cultures. Brazilian journalism has long been influenced by the French writing style, which traditionally features essayistic and literary elements (Herscovitz, 2004; Esser & Umbricht, 2014). Even under the increasing influence of U.S. journalism ideals during the 20th century, Brazilian journalism developed its very own style and culture that connects the different traditions of essayistic storytelling and detached observation with a peculiar relationship to political power and interventionism (Albuquerque and Roxo da Silva, 2009). German journalism culture also shares a rather continental European tradition (Hartsock, 2011; Stöber, 2014) that differs to certain degrees from the Anglo-American ideals of unbiased/objective and fact-based journalism¹⁰ that probably were also influential in the Indian and South African contexts due to their British colonial history.

Story Types

In order to further characterize the stories that are actually told in the COP coverage, we conducted a hierarchical cluster analysis as proposed by Matthes and Kohring (2008) using the

⁹ Please note: This study does not have a random sample but rather an event-based complete sample. Therefore it is neither necessary nor particularly meaningful to interpret significance tests. Our analysis will therefore concentrate on the actual values in each analysis rather than p-values.

¹⁰ Results from the analysis of the abortion discourse in Germany and the USA by Ferree et al. (2002) seem to contradict our result as they indicate that the US coverage uses more “personal narratives” (p.247) which are the individual stories of people (in portrait form) and their experiences. However, this understanding of narrative is more narrow than ours, which does not only account for personal narratives, especially since we understand narrativity as gradual and do not assign the label “narrative” or “not narrative” to a news story. Articles presenting such personal stories would of course score high on our narrativity index but are not the only form of narrativity that can be detected with our instrument.

narrative variables ‘overall theme’, ‘tone’ and ‘outcome’. All three variables were recoded, transforming their original nominal values into dummy variables with a binary code (‘0 = not present’ and ‘1 = present’). All variables were present in more than 5 percent of the articles and could therefore be included in the cluster analysis that was conducted using the Ward method and binary Euclidian distance. Five distinct story-type clusters were identified through the use of the elbow criterion¹¹. The clusters are cross-tabulated with all variables included in the cluster analysis to be able to describe the narrative content of each group (Table 1). The high lambda values on several variables show that the clusters do differ substantially on the type of narrative genres they instantiate. Names for the clusters were found in group discussions of the research team. This interpretative process required deep knowledge of the media material as well as context knowledge that researchers have gained throughout the years of the project¹².

[Table 1 about here]

The most frequent narrative (32.4 percent of all articles) is the one we call ‘*Ongoing Conflict*’, followed by the ‘*Catastrophe*’ narrative (20.9 percent), the ‘*Hopeful Struggle*’ narrative (17.8 percent), the ‘*Business as Usual*’ narrative (14 percent), and the ‘*Stories of Success*’ narrative (13 percent)¹³.

Political or social conflicts dominate the theme variable in the ‘*Ongoing Conflict*’ narrative. This narrative tells the story of ongoing efforts to come to political decisions at the COPs where different interests clash. The tone used to tell this story is mostly unexcited/neutral but also sometimes passionate which reflects the considerate and exerted efforts as well as the emotional

¹¹ To apply the ‘elbow criterion’, we checked the increase in the Sum of Squared Distances (SSD) for different cluster solutions and stopped clustering after an observed ‘jump’ in the increase. To facilitate better interpretation we calculated the relative ‘slope’ between SSDs for the last ten clustering steps and then the ‘slope quotient’ between slopes. The resulting ‘quotients’ provide a quite clear numerical indication for the ‘jump’ in the increase of SSDs.

¹² During the project, the research team also attended several UN climate change conferences, where they talked to experts from media, NGOs and delegations and learned a lot about different perspectives and arguments (Lück, Wozniak & Wessler, 2015; Adolphsen & Lück, 2012).

¹³ Example articles for all story types can be requested from the authors.

appeals that come from certain actors at the conferences who try to draw attention to their dramatic situation and the urgency to act. However, in these stories, the conflict presented is not fixed in the end which represents the ongoing efforts of the climate change negotiations where only few actual results were achieved before COP 21 in Paris in December 2015.

The '*Catastrophe*' narrative is the most dramatic and less hopeful story about climate change and climate policy. The theme variables 'failure after struggle' and 'struggle over destiny' highlight both the drama and the profound sense of loss transpiring from these stories. The tone is pessimistic in almost 100 percent of the articles in this cluster as seems to be no viable solution to effectively mitigate climate change. Fittingly, the conflicts depicted are not solved in the end despite the urgency.

The '*Hopeful Struggle*' narrative marks a contrast to the catastrophic narrative. 'Struggle over destiny' is the dominant theme, again highlighting the urgency of the situation. However, the tone is unexcited/neutral, which points to a rather confident handling of the challenges, as well as optimistic or even passionate, which both represent the hope to be able to mitigate climate change with the right actions. In this narrative the conflict is fixed in the end, which can either mean that negotiation partners have come to some compromise that allows for action or that measures taken are even seen as effective to reach climate policy goals.

Articles in the cluster of the '*Business as Usual*' narrative tell the story of climate change and climate policy as a routine business and recurrent event. The excitement level is low since there is not much new – politicians are negotiating, civil society is protesting and science announces the newest results that underline what is usually already known. The unexcited/neutral tone corresponds to this theme in most of the cases. There is no conceivable outcome since these stories are pieces in the puzzle of a long-term story of sustained efforts.

The last narrative cluster offers the most distinct storyline: '*Success Stories*' that talk about a smaller or larger triumph in the struggle against climate change. These stories are a hundred

percent optimistic and the conflict is portrayed as being resolved in the end. These are stories about results and compromises in the negotiations but also individual success stories about people with outstanding ideas and projects that fight climate change effectively.

These five story types represent different interpretative patterns of climate change in the newspaper coverage across five countries. They reveal basic meaning construction and vividly characterize how climate change and climate policy processes are viewed and understood in the mediated debate. In a next step, we look at the prevalence of these story types in the five countries studied in order to reveal country-specific particularities as well as similarities (Table 2).

[Table 2 about here]

The '*Ongoing Conflict*' narrative is dominant in all countries but Brazil where, in turn, the '*Catastrophe*' narrative is the one most often told followed by '*Hopeful Struggle*', which points to a certain inconclusiveness about the issue. In Brazil, climate change seems to be everything but business as usual. By contrast, climate change and climate policy are clearly stories of conflict in the other countries. A closer look reveals subtle differences that should not be ignored and can tell us a lot about the countries' mainstream media's views on the issue. In South Africa, the '*Ongoing Conflict*' narrative is most often used (44.2 percent of all narratives) while the second most frequent narrative is used less than half as often (20.2 percent for '*Hopeful Struggle*'). In India, the '*Catastrophe*' narrative is not salient at all; with a share of only 13.4 percent it is the narrative least often used. '*Success Stories*' are most often told in the U.S. newspapers' coverage and least often in South Africa. The values for Lambda and Cramer's V also suggest that there is a relation between the country and the distribution of story types.

Narrative Roles

To further characterize the stories told in the five countries studied, we analyze the narrative roles, that is, to which individuals or collectives the roles of victim, villain or hero are

assigned in climate change coverage. To reduce complexity and maximize contrast we concentrate on the two story types in which the distribution of narrative roles is most distinctive: the *Success Story* and the *Catastrophe*.

Looking at the victim-villain-hero-constellations we mainly find two patterns in these two story types. In the cases of Germany and the US, victims of climate change (and climate change politics) are “other”, more or less specifically defined groups such as the developing countries, poor countries, small island states and so forth. The ones responsible for the misery, the villains in the stories on climate change and climate change politics, are also “others” – responsibility is generally assigned to someone else but the own country. Oftentimes, villains are unspecified such as “humankind” or “past generations” but oftentimes villains are named specifically. German coverage assigns responsibility also to other industrialized countries such as the USA, Canada, and Japan, but also to a few emerging countries such as China or Bolivia which have all displayed strong opposition at one point in the negotiations during the years before COP 21 in Paris. In the US coverage, emerging countries such as India and China are displayed frequently as villains, which reflects a long lasting conflict in which the US refused to commit to any binding agreements as long as this would exclude emerging countries from mitigation responsibility (Boykoff and Boykoff, 2007). The ones solving the problems, the heroes of these stories, however, are the countries of the West or individuals in these countries.

On the other side, South African, Indian, and Brazilian newspaper coverage sees their respective home countries clearly both as victims (partly subsumed under more comprehensive collectivities such as all developing nations) and as heroes that oppose the prevalent circumstances. Picturing the villains is also unambiguous: rich and developing countries are deemed responsible for the problems at hand.

Investigating these role constellations in the coverage of the different countries clearly reveals that there is a country-specific structure of victim-villain-hero-constellation and that this is used in the national coverage to particularly define the own role on the political stage.

Identifying Multimodal Issue Frames

In order to characterize the framing¹⁴ we performed another hierarchical cluster analysis on the frame element data, as proposed by Matthes and Kohring (2008). Since textual frame elements were coded on the statement level and visual frame elements at the visual level, all frame elements had to be aggregated to the same article level by using dummy variables (0 = frame element absent, 1 = frame element present) before running the cluster analysis. We used a lower threshold of two percent for visual elements to be present in the sample since only 37 percent of all articles contained images at all and so visual variables had a lower probability of showing up in the entire dataset. The frequency analysis then resulted in 34 variables including 22 text-based and 12 visual frame elements to be used for the hierarchical cluster analysis (again using the Ward method and binary Euclidian distance). Four clusters emerged using the ‘elbow criterion’, which each represent an issue frame. To better understand the structural composition of these frames we cross-tabulate the cluster affiliations of all articles with the individual frame elements¹⁵. The four frames were named ‘*Global Warming Victims*’ frame, ‘*Political Dispute*’ frame, ‘*Sustainable Energy*’ frame and ‘*Common Sense*’ frame.

The ‘*Global Warming Victims*’ frame emphasizes the consequences of global warming. Almost 73 percent of these articles mention the increase of temperature, 50 percent point to extreme weather and societal consequences. These are connected with fossil fuels as the cause most often emphasized. The cluster does not deal with remedies much, but connects

14 Other publications from the authors engage in more detail in investigating country specific framing, offering more explicit insights and further reflections on the role of visual elements and event-related frame convergence across vastly different contexts (Wessler, Wozniak, Hofer & Lück, 2016; Wozniak, Wessler & Lück, 2016).

15 The detailed distribution of frame elements across clusters is available in the online appendix [URL omitted for anonymity].

consequences at the textual level with landscape objects or ordinary citizens at the visual level, which makes it apparent for what and whom these consequences are most relevant.

While the '*Political Dispute*' frame mentions consequences and causes of climate change, this frame is remarkable for examining a range of different remedies discussed in the negotiation process of the COPs. It is not surprising that there are fewer visual elements here, and if there are, politicians are shown at least more often than others.

The '*Sustainable Energy*' frame focuses less on consequences but names fossil fuels in 50 percent of its articles as the cause of climate change. The emphasis in this frame lies more on the remedies, especially on clean energy. The textual elements in this frame are supported by a few common visual elements that, for example, show urban or natural landscape, but most remarkably PR stunts and NGO activists.

The '*Common Sense*' frame is less distinctive. The elements that appear most often here are standard items such as increase of temperature as a consequence, fossil fuels as the cause and clean energy as the remedy. These elements are probably the least contentious ones in the mainstream climate change discourse and present widespread basic and common sense knowledge¹⁶. Articles in this frame are shorter (less than 400 words on average compared to about 480 to 580 words in the other clusters). Only about 27 percent of these articles contain visual elements. One should think of the articles in this cluster as short notifications rather than as substantial reports. They are still important elements in newspaper coverage as they present pieces of information that are needed to keep track of the issue.

[Table 3 about here]

In line with our expectations we do not find striking differences in frame occurrence between the five countries (Table 3). This is also suggested by the very low values of Lambda

¹⁶ At the same time, they may also represent precisely such basic ideas, which are already doubted by fundamental skeptics of climate change who would reject these basic premises.

and Cramer's V. The only remarkable exception is Brazil where the '*Sustainable Energy*' frame is very strong while the '*Political Dispute*' frame as well as the '*Global Warming Victims*' frame are weak compared to the other countries. But overall hypothesis 1, according to which country differences in framing should be smaller than differences in story types used, is well supported.

Combining Story Types and Frames

We have seen in Tables 2 and 3 that countries differ in their use of story types whereas the usage of frames is more uniform across countries. In our last analytical step, we cross frames and narratives in order to find out whether frames are combined with different narratives in the countries under study. When comparing countries according to their use of story types within each issue frame, as shown in Figure 1, different patterns emerge.

[Figure 1 about here]

Global Warming Victims Frame

The '*Ongoing Conflict*' narrative is most often used with the '*Global Warming Victims*' frame (35.1 percent of the articles containing this frame). However, not all countries use this narrative within the victims frame to the same extent. In South Africa as well as Germany, the '*Ongoing Conflict*' narrative is especially strong compared to the other countries. This combination emphasizes the political side of the problems that victims face and reflects a general understanding of the connection between political conflict (e.g. with its lack of ambitious action in the negotiation process) and the effects on people and countries.

The use of the '*Catastrophe*' narrative is also marked by a distinct country difference: This narrative is used as a major narrative for dealing with global warming victims only in Brazil; the other countries do not prioritize this narrative in such a remarkable way. 56.3 percent of the Brazilian articles within this frame belong to the '*Catastrophe*' narrative with its fatalistic connotations. One might find a hint for an explanation in the Global Climate Risk Index (Kreft

et al., 2016) which calculates the vulnerability of countries due to climate change. In the twenty years period from 1995 to 2014, Brazil takes place 82 on average in the country list. Compared to the other countries in our sample, this indicates a low risk (with Germany on place 18, the US on place 25, India on place 16 and only South Africa with a lower vulnerability at rank 90). However, during the last years, the risk seems to increase as Brazil moves up the risk ladder to rank 36 in 2013 and rank 21 in 2014. It may be that this increasing vulnerability is reflected in the media coverage through the '*Catastrophe*' narrative. Another argument may account for the strength of the global warming victim frame and the '*Catastrophe*' narrative in Brazil. During past climate change conferences, Brazil developed an outgoing and professional communication strategy to represent the country and its struggles with and efforts against climate change (Adolphsen, 2014). Together with the BASIC-countries, Brazil raises a certain demand of representing the Global South. This may also be reflected in the domestic media coverage in which the extent of the Brazilian struggle is depicted as a representation of the general struggle of the Global South.

Within the three other narratives, country differences are not as distinct. The 'Hopeful Struggle' narrative is used by all countries almost to the same extent. Within the 'Business as Usual' narrative, it is striking that we do not find this narrative used within the 'Global Warming Victims' frame in Brazil at all. The absence of this rather technical and unexcited narrative supports the explanation above and highlights the urgency with which the issue is handled in Brazil.

Understandably, success stories are rarely combined with the victims frame. Only India sticks out slightly compared to the other countries. This might be explained with some context knowledge that we gained from the identification of narrative roles. In the Indian coverage, the country is oftentimes presented as victim of climate change as well as hero who solves problems. Combining success stories and the victim frame reflects the positive image India is

given in the coverage for their attempts to propose solutions (even though these are often not easily merged with other countries' demands).

Political Dispute Frame

Within the '*Political Dispute Frame*', again, the '*Ongoing Conflict*' narrative is the most frequent one (35.4 percent of the articles in this frame cluster). Differences in the use of the '*Ongoing Conflict*' narrative are not as obvious as in the '*Global Warming Victims*' frame, however. The narrative is strong in Germany, India and South Africa. It is less often used in the US and least often in Brazil.

Regarding the '*Catastrophe*' narrative, we see the reverse picture. The US and Brazil use the '*Catastrophe*' narrative more often than the other countries. This adds a certain amount of urgency to that frame but also depicts a certain reluctance towards the political process which apparently does often not seem to be effective.

Sustainable Energy Frame

The '*Ongoing Conflict*' narrative is also the most often used narrative within articles with the sustainable energy frame (33 percent). Germany, India and South Africa combine sustainable energy more often with the conflict narrative than with one of the other narratives. For Germany, having to face the ongoing challenge of the '*Energiewende*' (energy turnaround), issues of sustainable energy are still a matter of political conflict; skeptics have to be convinced continuously and solutions for practical problems in the transitional process have to be found. For South Africa and India, on the other hand, it seems likely that, as emerging countries, they link sustainable energy with an ongoing conflict since the installation of renewable energy is associated with high costs and perceived risks for economic development.

Within the '*Hopeful Struggle*' narrative we detect that Brazil uses this narrative more often than other countries which might be surprising due to the overall dominance of the '*Catastrophe*'

narrative in Brazil. Finally, US newspapers link the sustainable energy frame with ‘Success Stories’ more often than the other countries.

Common Sense Frame

Within the biggest frame cluster, it is more difficult to detect peculiarities. Again, the ‘Ongoing Conflict’ narrative is the one most dominant across countries but with a share of 28.9 percent less prevalent overall. This less distinct framing obviously leaves room for a more even distribution of different kinds of narratives.

Considering the other three frames, however, hypothesis 2 (“*A particular issue frame will be combined with different story types in different countries, reflecting country-specific patterns of narrative coloring even for the same issue frame*“) was supported to a considerable degree.

Conclusion

This paper pursued three main goals: (1) to theoretically and conceptually distinguish the two communicative modes framing and narration, (2) to characterize the specific narratives and issue frames within the news coverage on climate change and climate policy across countries, and (3) to sort out the influences of global trends of homogenization in journalism as well as cultural particularities on newspaper coverage. Within the transnational setting of the climate change conferences, we expected that different levels of influence would determine the constitution of the coverage in each country. While differences in the degree of narrativity in the coverage can be explained with a country’s journalistic tradition, the dominance of a specific story type more likely reflects certain mainstream national views on climate change and climate politics. Narrative roles on the other hand rather mirror a country’s strategic position in global climate politics, that is, its relationship to other countries, its economic status, and its historic role as a causal agent of climate change (whether, for example, it sees itself as a victim of climate change with no historic responsibility). We have also seen that framing

travels more easily across borders. It transcends cultural borders especially in cases like the COPs that are focal points for global attention to an issue and provide comparable working conditions and a similar access to information for journalists.

Our results are in line with theoretical considerations about global homogenization processes at the professional level as expressed in the journalistic product (e.g. Mancini, 2008; Reese, 2008). Transnational events such as the climate change conferences are especially fertile grounds for such homogenizing developments. This study therefore contributes to comparative research that tries to understand journalistic work and products within an increasingly interconnected world. By simultaneously regarding both narratives and issue frames in the media coverage of culturally distinct countries for the first time here we find the two different levels of culture that Mancini (2008) emphasizes at work: the (globalized) professional culture in which we can observe a trend towards homogenization of content production, on the one hand, and the more distinct national cultures in which most journalists still operate. We find the level of professional culture reflected in the convergence of the issue framing that results from a similar access to the global event and the information made available. The specific use of narratives, however, reflects more clearly national particularities in news reporting with which information is made culturally resonant for a specific audience.

Our quantitative instrument allowed us to investigate the complex concepts of media framing and narration concurrently and in relation to each other. The cluster analyses we employed on both communicative modes admittedly reduce complexity quite heavily. More delicate cultural differences could probably be revealed by adding a qualitative analysis of typical stories in each country. However, for the purpose of relating both concepts and comparing them in five different countries and over the time frame of four climate change conferences our approach proved to be both suitable and insightful. For future research, our

results indicate that the combined investigation of different communicative modes can serve to reveal different levels of influence on the media coverage.

References

- Adolphsen M (2014) *Communication strategies of governments and NGOs: Engineering global discourse at high-level international summits*. Wiesbaden: Springer VS.
- Adolphsen M and Lück J (2012) Non-routine interactions behind the scenes of a global media event: How journalists and political PR professionals co-produced the 2010 UN climate conference in Cancún. *Medien & Kommunikationswissenschaft, Sonderband 'Grenzüberschreitende Medienkommunikation'*: 141–158.
- Albuquerque A de and Roxo da Silva MA (2009) Skilled, Loyal, and Disciplined: Communist Journalists and the Adaptation of the American Model of "Independent Journalism" in Brazil. *The International Journal of Press/Politics* 14(3):376–395.
- Barthes R and Duisit L (1975) An Introduction to the Structural Analysis of Narrative. *New Literary History* 6(2):237–272.
- Boykoff MT and Boykoff JM (2007) Climate change and journalistic norms: A case-study of US mass-media coverage. *Geoforum* 38(6): 1190–1204.
- Brüggemann M (2014) Between frame setting and frame sending: How journalists contribute to news frames. *Communication Theory* 24(1):61–82.
- Curran J, Esser F, Hallin DC, Hayashi K and Lee C (2015) International News and Global Integration. *Journalism Studies*: 1–17.
- Dunn A (2003) Telling the story: Narrative and radio news. *The Radio Journal: International Studies in Broadcast and Audio Media* 1(2):113–127.
- Entman RM (1993) Framing: Toward clarification of a fractured paradigm. *Journal of Communication* 43(4):51–58.

- Esser F and Umbricht A (2014) The evolution of objective and interpretive journalism in the Western press: Comparing six news systems since the 1960s. *Journalism & Mass Communication Quarterly* 91(2), 229-249.
- Franzosi R (2010) *Quantitative narrative analysis*: SAGE Publications.
- Gamson WA and Modigliani (1989) Media discourse and public opinion on nuclear power: A Constructionist Approach. *American Journal of Sociology* 95(1):1–37.
- Hanitzsch T (2007) Deconstructing Journalism Culture: Toward a Universal Theory. *Communication Theory* 17(4):367–385.
- Hanitzsch T (2008) Universalität, Differenz und ideologische Artikulation: Ein Ansatz zur Systematik journalistischer Kulturen. In: Hahn O (ed.) *Journalistische Kulturen: Internationale und interdisziplinäre Theoriebausteine ; [Lehrbuch]*. Köln: von Halem, pp. 201–219.
- Hartsock JC (2011) Literary reportage: The "other" literary journalism. In: Bak JS and Reynolds W (eds) *Literary journalism across the globe: Journalistic traditions and transnational influences*. Amherst: University of Massachusetts Press, pp.23–46.
- Hepp A (2008) Transkulturelle Kommunikation als Perspektive: Die Globalisierung der Medienkommunikation und journalistische Kulturen. In: Hahn O (ed.) *Journalistische Kulturen: Internationale und interdisziplinäre Theoriebausteine*. Köln: von Halem, pp.182–200.
- Herscovitz HG (2004) Brazilian journalists' perceptions of media roles, ethics and foreign influences on Brazilian journalism. *Journalism Studies* 5(1):71–86.
- Higgins L and Brush L (2006) Personal Experience Narrative and Public Debate: Writing the Wrongs of Welfare. *College Composition and Communication*: 694–729.

- Hinyard LJ and Kreuter MW (2007) Using narrative communication as a tool for health behavior change: A conceptual, theoretical, and empirical overview. *Health Education & Behavior* 34(5):777–792.
- Johnston J and Graham C (2012) The new, old journalism. *Journalism Studies* 13(4):517–533.
- Kaplan R (2012) The Origins of Objectivity in American Journalism. In: Allan S (ed.) *The Routledge companion to news and journalism*. London, New York: Routledge, pp. 25–37.
- Kreft S, Eckstein D, Dorsch L and Fischer L *Global Climate Risk Index 2016: Who Suffers Most From Extreme Weather Events? Weather-related Loss Events in 2014 and 1995 to 2014*.
- Krøvel R (2011) Journalistic narratives of success and failure at the Bali Climate Change Conference in 2007. *Intercultural Communication Studies* 20(2):89–104.
- Kunelius R and Eide E (2012) Moment of Hope, Mode of Realism: On the Dynamics of a Transnational Journalistic Field during UN Climate Change Summits. *International Journal of Communication* 6:266–285.
- Lück J, Wozniak A and Wessler H (2015) Networks of Coproduction: How Journalists and Environmental NGOs Create Common Interpretations of the UN Climate Change Conferences. *The International Journal of Press/Politics* 21(1): 25–47.
- Mancini P (2008) Journalism cultures: A multi-level proposal. In: Hahn O (ed.) *Journalistische Kulturen: Internationale und interdisziplinäre Theoriebausteine ; [Lehrbuch]*. Köln: von Halem, pp.149–167.

- Matthes J and Kohring M (2008) The content analysis of media frames: Toward improving reliability and validity. *Journal of Communication* 58(2):258–279.
- McComas K and Shanahan J (1999) Telling stories about global climate change: Measuring the impact of narratives on issue cycles. *Communication Research* 26(1):30–57.
- Reese SD (2008) Theorizing globalized journalism. In: Löffelholz M and Weaver DH (eds) *Global journalism research: Theories, methods, findings, future*. Malden, MA: Blackwell Pub., pp.240–252.
- Roeh I (1989) Journalism as Storytelling, Coverage as Narrative. *American Behavioral Scientist* 33(2):162–168.
- Schudson M (2012) *The sociology of news*. New York: W.W. Norton & Company.
- Schwarze S (2006) Environmental Melodrama. *Quarterly Journal of Speech* 92(3):239–261.
- Shen F, Ahern L and Baker M (2014) Stories that count: Influence of news narratives on issue attitudes. *Journalism & Mass Communication Quarterly* 91(1):98–117.
- Smith R (1997) Mythic elements in television news. In: Berkowitz DA (ed.) *Social meanings of news: A text-reader*. Thousand Oaks, Calif: Sage Publ, pp.325–332.
- Stöber R (2014) *Deutsche Pressegeschichte: Von den Anfängen bis zur Gegenwart*. Konstanz: UVK.
- Tenenboim-Weinblatt K, Hanitzsch T and Nagar R (2015) Beyond peace journalism: Reclassifying conflict narratives in the Israeli news media. *Journal of Peace Research*.
- Wessler H, Wozniak A, Hofer L and Lück J (2016) Global Multimodal News Frames on Climate Change: A Comparison of Five Democracies around the World. *International Journal of Press/Politics* 21(4): 423–445.

- Wolf W (2002) Das Problem der Narrativität in Literatur, bildender Kunst und Musik. In: Nünning V (ed.) *Erzähltheorie transgenerisch, intermedial, interdisziplinär*. Trier: WVT Wiss. Verl. Trier, pp.23–104.
- Wozniak A, Lück J and Wessler H (2014) Frames, stories, and images: The advantages of a multimodal approach in comparative media content research on climate change. *Environmental Communication* 9(4): 469–490.
- Wozniak A, Wessler H and Lück J (2016) Who Prevails in the Visual Framing Contest About the United Nations Climate Change Conferences? *Journalism Studies*: 1–20.
- Ytreberg E (2001) Moving out of the Inverted Pyramid: narratives and descriptions in television news. *Journalism Studies* 2(3): 357–371.
- Zelizer B (2010) The culture of journalism. In: Curran J (ed.) *Media and society*. London: Bloomsbury Academic, pp.198–214.
- Zerba A (2008) Narrative story telling: Putting the story back in hard news to engage young audiences. *Newspaper Research Journal* 29(3):94–102.

Table 1 Distribution of narrative elements across clusters (all articles; column percentages within each variable)

Narrative features		<i>Ongoing Conflict</i>	<i>Catastrophe</i>	<i>Hopeful Struggle</i>	<i>Business as Usual</i>	<i>Success Story</i>	<i>total</i>	<i>Cramér's V</i>	λ (<i>symmetric</i>)
		n=400	n=255	n=244	n=173	n=164	n=1,236		
<i>Theme</i>	Everyday business	27.5	0.0	10.7	100.0	0.0	25.0	0.75	0.21
	Failure after struggle	11.5	38.4	0.0	0.0	0.0	11.7	0.45	0.05
	Triumph over adversity	4.8	0.4	18.0	0.0	100	18.4	0.84	0.29
	Struggle over destiny	20.8	36.1	56.1	0.0	0.0	25.2	0.46	0.07
	(Political/ Social) Conflict	35.5	25.1	15.2	0.0	0.0	19.7	0.35	0
<i>Tone</i>	Fatalistic	10	0.0	2.5	0.6	0.0	3.8	0.23	0
	Optimistic	5.0	0.0	20.1	5.2	100.0	19.6	0.81	0.29
	Unexcited/ neutral	49.5	0.0	47.1	87.3	0.0	37.5	0.62	0.14
	Passionate	27.3	0.4	27.9	2.3	0.0	14.7	0.38	0
	Pessimistic	8.3	99.6	2.5	4.6	0.0	24.4	0.9	0.42
<i>Outcome</i>	No conceivable outcome	16.3	7.1	38.1	100.0	0.0	28.2	0.7	0.24
	Conflict fixed	0.8	5.5	61.1	0.0	100.0	26.7	0.83	0.33
	Conflict not fixed	83.0	87.5	0.8	0.0	0.0	45.1	0.85	0.45

DARK GREY: elements decisive for cluster interpretation with a frequency of at least 35 percent of the articles in the cluster; **LIGHT GREY:** element subordinate for cluster interpretation with a frequency at least 20 percent of articles in the cluster.

Table 2 Distribution of story types within countries (row percentages)

		<i>Ongoing Conflict</i>	<i>Catastrophe</i>	<i>Hopeful Struggle</i>	<i>Business as Usual</i>	<i>Success Stories</i>
	n	%	%	%	%	%
<i>Brazil</i>	323	23.2	31.6	26.3	3.7	15.2
<i>Germany</i>	348	36.5	19.0	14.4	19.3	10.9
<i>India</i>	247	36.0	13.4	15.8	20.2	14.6
<i>South Africa</i>	138	44.2	14.5	13.0	13.0	8.0
<i>USA</i>	180	26.7	18.9	23.3	14.4	16.7
<i>total (articles)</i>	1236	32.4	20.6	19.7	14.0	13.3

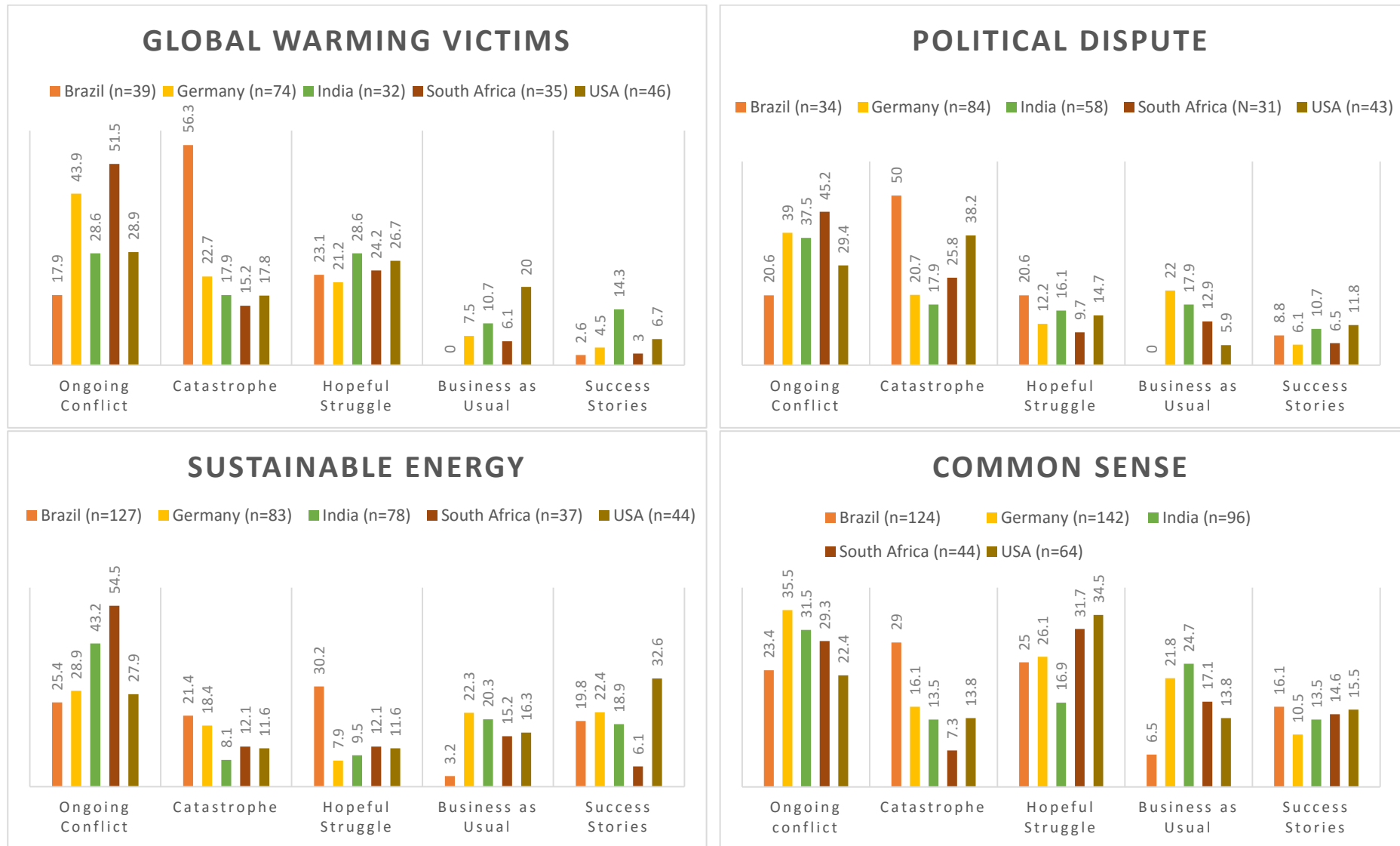
Note: $\chi^2=108.04$ $df(16)$; $\lambda=0.06$ (asymmetric with story types as dependent variable); $V=0.3$

Table 3 Distribution of frames within countries (row percentages)

		<i>Global warming victims frame</i>	<i>Political dispute frame</i>	<i>Sustainable energy frame</i>	<i>Common sense frame</i>
	n	%	%	%	%
<i>Brazil</i>	329	11.9	10.3	38.6	39.2
<i>Germany</i>	383	19.3	21.9	21.7	37.1
<i>India</i>	264	12.1	22.0	29.5	36.4
<i>South Africa</i>	147	23.8	21.1	25.2	29.9
<i>USA</i>	188	24.5	18.1	23.4	34.0
<i>total (articles)</i>	1311	17.2	18.4	28,	36.2

Note: $\chi^2=59.92$ $df(12)$; $\lambda=0.00$ (asymmetric with frames as dependent variable); $V=0.12$

Figure 1 Combinations of frames and story types (country comparison)



Note: N=1,236 newspaper articles; numbers above bars are percentages based on all articles published in the particular country that carry the respective issue frame.