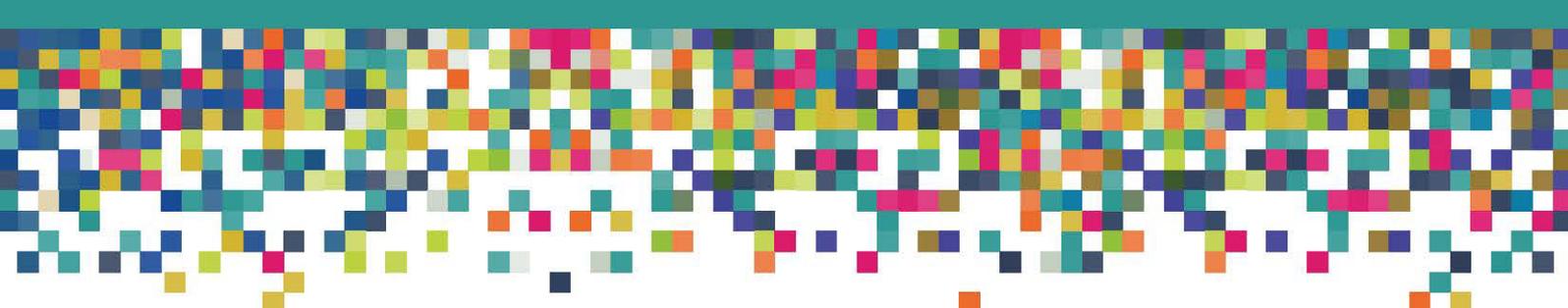




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NEWS DIVERSITY AND MORALITY IN THE CLIMATE REPARATIONS DEBATE

A Quantitative Content Analysis of British and Irish News
Coverage of the COP27 Negotiations about Loss and Damage

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ABSTRACT

At the UN climate conference 2022, the parties agreed to set up a 'loss and damage' fund to help poor countries that have contributed little to climate change cope with its destructive impacts. Sometimes framed as compensation or climate reparations, the issue is expected to raise somewhat diverging interpretations by newspapers depending on their political leaning. However, previous research shows that the extent to which this is the case varies according to how partisan a country's news media is. To test this theory, this study uses quantitative content analysis to compare the coverage of the negotiations about loss and damage from British and Irish newspapers. An index derived from news diversity research is employed to measure how balanced the coverage is in terms of its representation of relevant actors and viewpoints. Moreover, the moral language of the articles is analysed using a dictionary-based tool. The representation of five moral values is evaluated based on the same index. It is hypothesised that the British sample will exhibit a less balanced coverage (lower internal pluralism) and larger differences between the newspapers in terms of their representation of actors, viewpoints, and moral values (higher external pluralism). The results show that the British newspapers are simultaneously more internally and externally pluralist than the Irish newspapers. While this partly conflicts with existing theories, the countries' varying levels of news diversity can be explained by the resources of newsrooms and the national context of the loss and damage debate, amongst other factors. Despite some methodological weaknesses, this study offers an innovative approach that future studies can build on to research moral language as a component of news diversity.

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INTRODUCTION

The UN climate change negotiations that took place in Egypt in November 2022 ended with a decision that many celebrated as historic. The participating nations agreed to set up a 'loss and damage' fund to help poor countries that have contributed little to climate change cope with its destructive impacts. Small island nations had been asking for such compensation for over thirty years and at the 27th Conference of the Parties (COP), the issue was on the official agenda for the first time.

Loss and damage can be understood as the 'third pillar' of climate policy (Broberg, 2020:212). Adaptation to the effects of climate change becomes necessary when mitigation measures do not suffice. Loss and damage, on the other hand, refers to the unavoidable damages resulting from climate change that are so severe that they cannot be addressed by adaptation alone. This includes economic and social losses, for instance, of livelihoods or cultural heritage, brought about by extreme weather events as well as slow-onset impacts, such as sea level rise (Wallimann-Helmer *et al.*, 2019). After being hit by climate-related disasters, countries in the Global South often find themselves indebted if they are issued loans for recovery by institutions like the International Monetary Fund (Perry, 2020). For this reason, developing countries have demanded a funding facility that developed countries pay into to provide quick and reliable assistance. Developed nations had long opposed the creation of a dedicated loss and damage fund, arguing that existing adaptation programmes would suffice. The EU, US and others were moreover deterred by wordings such as 'compensation' which could imply legal liability and hence provoke litigation claims (Vanhala and Hestbaek, 2016). They accepted the final deal in Sharm el-Sheikh under the condition that it made no mention of compensation or liability (Bhandari *et al.*, 2022).

Nevertheless, climate justice advocates and right-wing tabloids alike tend to frame the money for loss and damage as climate reparations, either to make a case for it or to portray it as an unreasonable ask. The British public seems relatively divided on this, with 49% recognising a responsibility to pay for loss and damage, 31% not feeling responsible, and 20% undecided (Carrington, 2022). In the coverage of COP27, the UK's news media tended to interpret the developments on loss and damage through diverging editorial positions. For instance, the Daily Mail warned that 'taxpayers' cash' would 'be funnelled abroad' (Beckford, 2022) while The Independent titled 'rich nations want to delay [their]

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loss and damage aid pledge' (Mishra, 2022). This suggests that the further ideologically apart news outlets are, the more their coverage of loss and damage will present just one interpretation of the issue, perhaps at the expense of more nuanced questions that were also discussed at the negotiations.

As the UK is characterised by a highly partisan press (Norris, 2009), I wondered whether British newspapers reported on the loss and damage debate in a less balanced manner than those of a country with a less polarised media landscape. The concept of news diversity provides a useful approach to answering this question, as it allows researchers to quantify the range of viewpoints and actors represented in a news story (Masini and Van Aelst, 2017). Hence, I decided to conduct a quantitative content analysis and compare the coverage of four British and four Irish newspapers as the latter are more politically neutral (Hallin and Mancini, 2004).

Although a news diversity approach is effective at identifying the *explicit* viewpoints in news coverage, it may not be fit to capture the moral values that *underpin* the different positions. As loss and damage is an inherently ethical issue (Wallimann-Helmer *et al.*, 2019), the news articles will likely contain underlying arguments about harm, blame, and the distribution of resources, perhaps revealing the moral conviction of the journalist. In fact, it has been shown that newspapers with varying political leanings appeal to different moral values in their coverage (Fulgoni *et al.*, 2016). However, I am not aware of any studies that test whether this tendency is more pronounced in media systems with a strong partisan press, such as the UK. To fill this gap, this study uses a dictionary-based tool that extracts moral language from texts (Hopp *et al.*, 2021). This method derives from Moral Foundations Theory (Haidt and Joseph, 2004) which has been influential in explaining political divides from a psychological perspective. Through integrating Moral Foundations Theory into a news diversity framework, this study follows a novel approach towards examining the under-researched realm of climate ethics coverage.

This paper is structured as follows. The next chapter will review the relevant literature on news diversity and Moral Foundations Theory, leading to a specification of the research objectives. This is followed by an explanation of the chosen operationalisation of news diversity as well as its limitations. Next, the results of this study are presented. They will be discussed in relation to existing research and, lastly, potential avenues for future studies are proposed.

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LITERATURE REVIEW

This chapter firstly contextualises loss and damage as a moral issue and then reviews the relevant literature on news diversity and Moral Foundations Theory. Finally, the conceptual framework and research objectives will be stated.

Loss and Damage as a Moral Issue

In recent years, it has become common practice in the realm of climate change reporting not to portray scientific consensus as debatable (Brüggemann and Engesser, 2017). However, considerations of what constitutes a controversy, or a legitimate argument may be more relevant when it comes to the representation of ethical issues related to climate change, such as loss and damage. While there is evidence that most countries' vulnerabilities to climate change are disproportionate to their contribution to the problem (Althor, Watson and Fuller, 2016), the moral implications of this lie in the eye of the beholder.

The advocates of a loss and damage fund argue that those who are historically responsible for the harm that climate-vulnerable countries are suffering should provide compensation. This would require countries to pay into the fund 'in proportion to their share of global cumulative greenhouse [gas] emissions' (Page, 2008:557). This principle called 'Polluter Pays' can also be applied to high-emitting corporations. However, others argue that someone cannot be held accountable for their emissions from the early phases of industrialisation when they were 'blamelessly ignorant' about their harmful effects (Wallimann-Helmer *et al.*, 2019). Another approach, therefore, leaves emissions out of the equation. The 'Ability to Pay' principle states that any country that has the means to financially support countries suffering loss and damage must do so, irrespective of its historical or current emissions (Page, 2008).

The arguments in favour of and against a loss and damage fund can moreover be classified into the philosophies of cosmopolitanism and communitarianism. The former holds that people and nations across the world have moral obligations towards each other, whereas the latter prioritises national interests and the responsibilities of a state towards its own citizens (Laksa, 2014). Other arguments are not as clear-cut and may be based on a combination of principles. For instance, 'Ability to Pay'

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and 'Polluter Pays' both underpin calls on increasingly wealthy and high-emitting countries like China and India to contribute to the fund. In summary, loss and damage is an inherently moral issue and the debate about the fund is grounded in diverging philosophical principles.

Conceptualising News Diversity

The idea that the news media should represent a diverse range of voices and opinions commonly resonates through theories of the role of the press in democracies (Siebert, 1956; Graber, 2003). Yet there is substantial scholarly disagreement about what news diversity means and how it can be measured. Loecherbach *et al.* (2020) highlight three levels on which the assumptions made about news diversity affect how it is studied, namely the definition, normative embedding, and operationalisation of the concept.

Firstly, how news diversity is defined depends on whether it is approached from a production, representation, or reception angle. The former is largely concerned with the ownership and market shares of media outlets (Iosifidis, 2010; Humprecht and Esser, 2018). The latter regards the news diet of audiences and has gained attention in the wake of discussions about selective exposure, polarisation and algorithmic curation (Stroud, 2008; Resnick *et al.*, 2013). Nevertheless, most of the news diversity literature, conceptual as well as empirical, pertains to what Napoli (1999) calls content diversity. This includes the representation of topics, people, political parties and ideas in media content (Joris *et al.*, 2020; Loecherbach *et al.*, 2020). It is common to distinguish between viewpoint diversity, the range of opinions on a topic that is represented in a news story, and actor diversity, the range of source types that are quoted or paraphrased (Voakes *et al.*, 1996; Benson, 2009; Masini and Van Aelst, 2017). When comparing content diversity across media systems, it is useful to evaluate how internally or externally pluralist they are. *Internal pluralism* refers to a society in which individual outlets cover a wide range of viewpoints, targeting a large, heterogeneous audience. *External pluralism* characterises media systems in which the outlets express a narrow range of views to appeal to their separate, homogenous audiences. Under this condition, the differences between news outlets are salient and their internal pluralism is low (McQuail, 1992).

Secondly, due to its connection to the democratic functions of the press, news diversity is 'inherently normative' (Loecherbach *et al.*, 2020:607). The specific requirements that media content is judged

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against therefore depend on the model of democracy that is applied. For instance, scholars that assume a liberal model commonly refer to the 'marketplace of ideas' in which citizens are like consumers and should be free to choose from a range of political alternatives (Strömbäck, 2005; Vos and Wolfgang, 2018). The offers at the marketplace should be proportional to the heterogeneity in society, such as the distribution of political views, a concept that McQuail (1992) termed *reflective diversity*. On the other hand, Porto (2007) suggests that the marketplace of ideas is distorted, arguing that privileged groups can shape the news agenda while disadvantaged groups are barely represented. This critique suits the notion of deliberative democracy which requires the inclusion of speakers from the periphery of the public sphere (Ferree *et al.*, 2002). If all groups and views were given equal shares of media representation, one could speak of *open diversity* (Joris *et al.*, 2020). While complete equal or proportional representation is neither feasible nor desirable (McQuail, 1992), these normative differences have implications for the measurement of news diversity.

This shows that, thirdly, the assumptions made about news diversity impact its operationalisation. Content diversity can be seen as the antonym of media bias; however, empirically determining what a (non-)biased coverage looks like is a monumental task (Groeling, 2013). Stirling (2007) highlights two useful approaches: *Variety* is about the number of categories that are represented, such as political parties. The more political parties are featured in a news story, the greater the diversity. *Balance* goes beyond variety by referring to the distribution of categories. Greater diversity in this sense might mean that within the news story, an equal number of quotes is given to actors from each party. Loecherbach *et al.* (2020) find that most studies about news diversity measure the presence of certain viewpoints or actors, disregarding their distribution (e.g., Young and Dugas, 2012). This shows a priority of researching the *variety* dimension. Some studies use measures such as the Herfindahl-Hirschman Index to determine the concentration or dispersion of categories in media content (e.g., Benson, 2009). This is useful for studying the *balance* dimension, with the benchmark being an equal distribution as favoured by *open diversity* and deliberative ideals.

Regarding benchmarks, however, scholars often do not state how much diversity they consider 'enough' or simply interpret greater variety or balance as the better outcome (Benson, 2009; Vos and Wolfgang, 2018). Importantly, Baden and Springer (2017) point out that aiming for the greatest viewpoint diversity might contradict the journalistic task of breaking down complex debates into the

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most relevant points. Similarly, not all beliefs are equally valuable for public discourse, for instance regarding climate change denial. Hence, study results should be interpreted carefully to account for conceptual shortcomings.

Determinants of News Diversity

A common research objective in this field is to explain variation in news diversity which can be influenced by various factors at the article, news outlet, or media system level. It is well established that there is a positive relationship between the length of an article and actor as well as viewpoint diversity. Similarly, each additional actor that is featured increases the range of views covered in a news story (Humprecht and Büchel, 2013; Masini and Van Aelst, 2017; Masini *et al.*, 2018). Although it is commonly hypothesised that quality newspapers exhibit higher levels of content diversity than popular news outlets, the evidence for this is mixed (Benson, 2009; Masini and Van Aelst, 2017). This might be because many other factors determine how a news story is approached, such as the size of a newsroom and the national relevance of a given topic (Humprecht and Büchel, 2013). Similarly, Salgado and Nienstedt (2016) found the news coverage of the Euro Crisis to be less driven by the political orientation of newspapers and more by the dominant narrative of the respective country. They conclude that to consume media with high viewpoint diversity, it is more effective to add foreign newspapers to one's news diet than to read national publications across the political spectrum.

However, this does not mean that external pluralism is generally low among the ten countries studied by Salgado and Nienstedt (2016). Firstly, because their findings are only applicable to coverage of the Euro Crisis. And, secondly, national media landscapes vary depending on several factors, such as the relationships between the media and political parties, journalistic professional standards, and the role of the state. Based on these dimensions, Hallin and Mancini (2004) developed an influential typology of media systems which classifies Mediterranean countries as 'Polarised Pluralist', Central and Northern European countries as 'Democratic Corporatist', and Anglo-American countries as 'Liberal'. The former two are believed to be more externally pluralist. This is explained by the high involvement of organised social groups in 'Democratic Corporatist' countries, leading to an advocacy tradition in journalism. Similarly, newspapers in 'Polarised Pluralist' countries tend to have distinct political affiliations and readerships with the corresponding attitudes. The Liberal model, on the other hand,

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is characterised by higher internal pluralism as strong commercialism and journalistic professional standards drive fact-based reporting and relative political neutrality of news outlets (Hallin and Mancini, 2004).

The distinguishing feature that explains, in part, the varying levels of internal and external pluralism among the three media systems is called *political parallelism*. It refers to a strong connection between the media and politics, which can be indicated by a partisan bias in news content or organisational links between media outlets and political parties. Moreover, in systems with high levels of political parallelism, the political beliefs of journalists and audiences tend to match the affiliation of the media that they work for or consume (Hallin and Mancini, 2004). The countries in the Liberal model supposedly exhibit low levels of political parallelism; however, as Norris (2009) points out, the UK is a clear exception due to its highly partisan press. Based on this and other critiques of the original framework, Brüggemann *et al.* (2014) created a new typology of 'Northern', 'Central', 'Western' and 'Southern' media systems. The UK is no longer grouped with the US and Ireland and instead joins Germany, Austria, and Switzerland in the Central cluster.

News Diversity in the UK and Ireland

This classification of the UK and Ireland as different media systems suggests that they are suitable cases for a cross-country comparison of news diversity. Interestingly, Brüggemann *et al.* (2014) found Ireland to exhibit higher levels of political parallelism than the UK. However, this is no longer the case if broadcasting is left out of the equation, as political parallelism is far higher for British newspapers than for Irish newspapers (Lelkes, 2016). Moreover, Hallin and Mancini (2004:208) establish that 'political neutrality has come to be the typical stance of newspapers' in Ireland, whereas the British press is externally pluralist. This is further reflected in the newspapers' audiences as shown by the 'cross-platform audience political leaning scores' calculated by Fletcher, Cornia and Nielsen (2020). With zero being the population average, the direction of the score indicates the political orientation of an outlet's audience (negative for left-leaning, positive for right-leaning) and the magnitude shows the level of audience polarisation. For instance, the Guardian has a score of -0.17 and the Irish Independent of 0.03, demonstrating a great variation of audience polarisation between British and Irish news outlets (see Appendix 1, Figure 1 for all scores of the newspapers in this study).

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Moreover, the Irish party system does not have a historical left-right divide and has seen a slight leftward move of the electorate only in the last decade (Müller and Regan, 2021). So, while higher levels of political parallelism in the UK suggest that political differences will be more reflected in the media, there seems to be less of a divide in Ireland, to begin with.

News Diversity and Climate Change Reporting

While a popular topic in news diversity research is immigration (Benson, 2009; Masini *et al.*, 2018), much less attention has been paid to the representation of climate issues. Carvalho and Burgess (2005) found that editorial positions are crucial to explaining how three UK broadsheet newspapers vary in terms of their interpretation of scientific findings on climate change. Between 1985 and 2003, The Guardian and The Independent mostly represented climate change as an inherent danger, while The Times tended to dismiss IPCC reports and privilege business interests. Based on this UK-specific finding, Dirikx and Gelders (2010:201) hypothesise that newspapers' ideological standpoints impact climate change reporting only in media systems with a 'strong media opposition' and a 'historical bond' between the media and politics. This seems plausible as societies with these characteristics tend to be externally pluralist, meaning that the differences between newspapers' editorial positions will be more pronounced. Indeed, Dirikx and Gelders's (2010) assumption was confirmed by their analysis of the representation of climate issues in left-leaning and right-leaning French and Dutch newspapers, showing greater variation in the French sample. However, they add that a newspaper's ideological culture only makes a difference in the coverage of somewhat controversial issues, such as mitigation policies, which are more up for debate than the scientific certainty of anthropogenic climate change.

Regarding the representation of ethical issues related to climate change, Laksa (2014) found the British press to vary greatly in the extent to which they cover topics such as the unequal distribution of global carbon emissions and climate finance for developing countries. The Guardian devoted substantially more attention to climate ethics than The Telegraph and The Sun, both in absolute terms and in proportion to their total climate change coverage during the period of analysis. While there is no comparable study for Ireland, Wagner and Payne (2017) found little variation between the frames used by The Irish Independent, The Irish Times and The Sunday Business Post in their general climate change coverage. The newspapers presented a market-centred approach towards mitigation and

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offered little criticism regarding statements made by government and business actors. Overall, Ireland is a ‘neglected territory’ concerning research into the media coverage of climate issues (Robbins, 2020:172). When it comes to combining climate ethics with a news diversity lens, literature is extremely scarce, for Irish as well as British media.

Moral Foundations Theory

Having originated from anthropology and evolutionary psychology, Moral Foundations Theory (MFT) has been influential in explaining how humans make moral judgements and how this varies across cultures and political divides. It is based on the finding that what we deem right or wrong is determined by our intuitions rather than conscious reasoning. Presented with a scenario in which a social convention is upheld or violated, humans feel fast, automatic ‘flashes of approval or disapproval’ and only attempt to rationally justify their judgements afterwards (Haidt and Joseph, 2004:60). According to MFT, our moral intuitions can be grouped into six ‘foundations’, which are psychological systems that evolved as a response to adaptive challenges (Table 1). Care, fairness, and liberty focus on individual rights and are hence called ‘individualising foundations’ whereas the ‘binding foundations’, loyalty, authority, and sanctity, treat morality at a collective level (Napier and Luguri, 2013). Taken together, the six moral foundations help to explain the origin of many of the values, practices, and conventions of today’s societies and their function to ‘suppress or regulate self-interest and make cooperative societies possible’ (Haidt, 2013:314).

Table 1: Paired summary of moral foundations (Haidt and Joseph, 2004; Haidt, 2013)

Foundation	Adaptive Challenge	Current Trigger
Care/harm	Protecting vulnerable people, especially children	Signs of human and animal suffering
Fairness/cheating	Cooperating with others while avoiding free riders	Economic and social inequality, welfare systems
Loyalty/betrayal	Fostering commitment to one’s in-group	Perceived threat to national identity
Authority/subversion	Adhering to hierarchies and social norms	Disrespect towards authority figures
Sanctity/degradation	Avoiding contamination, disgust of potential dangers	Practices perceived as impure, e.g., abortion
Liberty/oppression	Maintaining autonomy, resisting abuses of power	Authoritarianism, discrimination, taxes

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Moral Foundations and Political Identities

Despite criticism about the distinguishableness and inclusion or exclusion of certain moral foundations (Suhler and Churchland, 2011; Gray and Keeney, 2015), MFT has advanced our understanding of political identities. While the existence of these moral intuitions is said to be innate and nearly universal (Haidt and Bjorklund, 2007), the extent to which people are receptive to them varies dramatically. There are many 'current triggers' of the moral foundations that can provoke visceral reactions in some people (examples given in the List of Summaries). People's moral intuitions can get activated by different issues. For instance, the fairness foundation explains a left-wing concern for economic inequality as well as a right-wing criticism of welfare states. The liberty foundation, which was added later to the theory, relates to antiauthoritarianism on the left and anti-government sentiments on the right (Haidt, 2013).

Generally, those identifying as left-wing make their moral judgements almost exclusively based on the individualising foundations, whereas conservatives rely on all foundations more or less equally, with a preference for the binding foundations (Graham, Haidt and Nosek, 2009; Haidt, 2013). Libertarians are only receptive to the liberty and, to a lesser extent, fairness foundations, while showing little concern for all other foundations (Iyer *et al.*, 2012). This helps to explain why people across the political spectrum often struggle to empathise with each other and are not receptive to arguments that do not cater to their 'moral personality type'. Conversely, reframing a position so that it is consistent with someone's moral values holds persuasive power. For instance, while environmental discourses tend to centre around the care foundation, conservatives show greater concern for environmental degradation when it is framed as dirty and impure, emphasising the sanctity foundation (Feinberg and Willer, 2019).

Moral Foundations in Media Coverage

Considering the representation of moral foundations in media content can add a valuable lens to news diversity research. For instance, audiences tend to select content that aligns with their moral values (Prabhu *et al.*, 2020). Moreover, Fulgoni *et al.* (2016) found a moral bias in partisan news sources, as liberal sources tended to use language that relates to the care and fairness foundations, whereas conservative sources endorsed mostly the loyalty and authority foundations. The strength of this

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difference likely depends on how partisan a news source is, as Hopp *et al.* (2021:240) found the centre-left New York Times to ‘adopt a more balanced coverage across foundations’, whereas the far-left Huffington Post leaned towards the individualising foundations. This research is enabled by dictionary-based tools that can identify moral content in texts (e.g., Graham, Haidt and Nosek, 2009; Hopp *et al.*, 2021). These dictionaries have been used to analyse the media coverage of a range of controversial topics, mostly in American news outlets (Clifford and Jerit, 2013; Bowe, 2018; Ji and Zhao, 2023).

As the intersection of climate issues and morality is predominantly studied on the level of individuals’ attitudes (e.g., Jansson and Dorrepaal, 2015; Dickinson *et al.*, 2016), I could only find two studies that analyse climate change coverage using moral foundations dictionaries. However, neither of them narrowed the broad topic of climate change down to sub-dimensions, such as climate ethics. Nevertheless, the research conducted by Song *et al.* (2022) is a useful reference point, as they found the care foundation to be emphasised the most in climate change coverage. Moreover, Sagi, Gann and Matlock (2015) compared news outlets with varying degrees of liberal and conservative leanings. Yet they did not consider whether the strength of partisanship affects the extent to which the news outlets use different moral foundations in their climate coverage.

Conceptual Framework and Research Objectives

The literature outlined above has illustrated three points that together form the rationale for this study. Firstly, loss and damage is an inherently moral topic that is worth being studied from the two conceptual lenses chosen. Some of the common arguments about the issue are grounded in philosophical principles, such as cosmopolitanism and communitarianism (Laksa, 2014). Secondly, news diversity research provides useful tools to examine how balanced the British and Irish news coverage is in terms of the representation of these viewpoints and the actors articulating them. However, as Moral Foundations Theory (MFT) demonstrates, an individual’s position on loss and damage will be guided by their moral intuitions rather than conscious reasoning (Haidt and Joseph, 2004). Presumably, this affects not only the explicit claims that are made about loss and damage but how these are supported by underlying moral convictions. So, thirdly, the values of a journalist, or those of the newspaper that they work for or of the sources that they quote, may be reflected in the

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moral language of their coverage of COP27. The extent to which this is the case likely varies according to how partisan a newspaper is, as Hopp *et al.*'s (2021) finding suggests.

This shows a key similarity between the news diversity and moral foundations literature. According to Hallin and Mancini (2004), news outlets in media systems characterised by strong political parallelism tend to present an issue from their respective editorial positions. Under those conditions, the inclination of right-leaning and left-leaning newspapers to appeal to different sets of moral foundations (Fulgoni *et al.*, 2016) may be more pronounced. As a result, these newspapers would attract morally homogenous audiences that are receptive to the respective moral foundations featured in their content (Haidt, 2013; Prabhu *et al.*, 2020), resembling the mechanism of external pluralism. This suggests that moral foundations should not only be studied alongside news diversity but as a dimension of it.

This study is based on an existing theory, namely that media systems with high levels of political parallelism are characterised by low internal and high external pluralism (Hallin and Mancini, 2004; Dirikx and Gelders, 2010). MFT provides an additional level of analysis on which this can be tested. Furthermore, my choice of topic and cases focuses on climate ethics and Irish news media as two fields previously overlooked in the literature. Putting all these elements together results in the following research question and hypotheses:

How do British and Irish newspapers compare in terms of the diversity of viewpoints, actors, and moral foundations reflected in their coverage of the COP27 negotiations about loss and damage?

H1: The British newspapers will exhibit lower levels of internal pluralism in terms of viewpoints (H1a), actors (H1b), and moral foundations (H1c) than the Irish newspapers.

H2: The British newspapers will exhibit higher levels of external pluralism in terms of viewpoints (H2a), actors (H2b), and moral foundations (H2c) than the Irish newspapers.

H3: There is a positive relationship between a newspaper's internal pluralism in terms of viewpoints (H3a) and actors (H3b) and its internal pluralism in terms of moral foundations.

This study contributes to the news diversity literature because it treats moral language as a component of content diversity. This allows me to detect moral values in the coverage beyond

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manually coding pre-defined categories. Furthermore, I provide a methodological contribution to the intersecting field of MFT and media studies, as I adopt a measure to assess the distribution of moral foundations in texts. In summary, this study aims to research an existing theory from news diversity literature with a new analytical, thematic, and geographical focus.

RESEARCH DESIGN AND METHODOLOGY

This chapter firstly outlines the methodological rationale of my study. It will then explain how the data was collected and analysed while acknowledging the limitations of these procedures. Finally, considerations of ethics and reflexivity conclude this chapter.

Methodological Rationale

Quantitative content analysis (QCA) is the most appropriate method for my purpose. This is because my study aims to test a hypothesis from an existing theory and draw reliable conclusions from a large-scale, comparative analysis of news coverage (Neuendorf, 2017). This method is widely used in the news diversity field, as it allows researchers to determine empirically how diverse media content is (Loecherbach *et al.*, 2020). However, I am aware of the weaknesses that QCA holds. To enable the greatest possible validity of results, the indicators by which the content is judged should be 'conceptually and theoretically sound' (Riffe *et al.*, 2019:132). This inevitably leaves room for imprecision and bias due to the sheer controversy about how content diversity can be operationalised, as the literature review has shown. Hence, the positivist idea that content analysis should be objective is inherently unattainable. Furthermore, simply counting certain categories in a text tells us little about their social impact on the world (Hansen, 1998).

Nevertheless, QCA is the most feasible approach for my research, especially considering how moral language in texts can be identified. Tools like the extended Moral Foundations Dictionary (eMFD, Hopp *et al.*, 2021), which this study uses, are designed for quantitative analyses. So, assessing news diversity quantitatively allowed me to integrate MFT more easily into this approach, which is crucial for testing my hypotheses.

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Data Collection

Sampling Technique

This study analyses articles from four British and four Irish newspapers: The Independent, The Guardian, The Times and The Daily Mail as well as The Irish Independent, The Irish Times, The Irish Examiner, and The Irish Mirror (including Sunday and online editions, if applicable). The rationale behind this selection was to have roughly comparable national samples consisting of quality as well as popular newspapers. I furthermore attempted to include two left-leaning and two right-leaning newspapers per country, as indicated by the previously discussed ‘cross-platform audience political leaning scores’ (Fletcher, Cornia and Nielsen, 2020). However, the Irish Daily Mail, which I initially intended to include, did not publish any articles on the negotiations about loss and damage (at least none which were accessible through the LexisNexis database). The Irish Mirror is the only other national, privately-owned Irish newspaper that met this criterium. As it is a left-leaning publication, it should be noted that the Irish sample has a slight left-skew. Nevertheless, both national samples contain the same number of quality and popular newspapers as the Irish Mirror is a tabloid.

To extract relevant articles from the selected newspapers, I searched for ‘loss and damage’ on LexisNexis for the period between 23rd October 2022 and 4th December 2022 (two weeks before and after COP27). Following Bowe’s (2018) sampling strategy, articles that mentioned ‘loss and damage’, or similar terms like ‘compensation’, in the headline or teaser were automatically included. I additionally included articles that discussed loss and damage in their main bodies, although it did not have to be the articles’ primary focus. Articles that did not express at least one viewpoint, as defined in Appendix 2.1, were dropped. After filtering duplicates out, this yielded a population of 234 articles, 179 from the UK and 55 from Ireland. As a result of this relatively low number, I was able to analyse all articles in the *population* without conducting any further sampling. However, I will not attempt to make any conclusions beyond the eight newspapers selected which I will continue to refer to as the country *samples*.

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Coding Frame

My coding frame operationalises actor and viewpoint diversity following an approach outlined by Benson (2009). Accordingly, actors represent different ‘institutional fields’ that are relevant to the respective topic. I inductively identified twelve such actor categories (Appendix 2.1). Next, I defined nine viewpoints, aiming to ‘comprehensively capture the ideological range of debate’ on loss and damage (Benson, 2009:408). While this was also based on an inductive approach, the first section of the literature review demonstrates that some of the viewpoints are grounded in philosophical arguments. A brief explanation of each viewpoint is provided in Table 2; more information can be found in Appendix 2.1.

Table 2: Summary of viewpoints

Viewpoint	Description	Philosophical Principle
Polluter Pays	Advocates for the creation of a dedicated loss and damage fund, argues based on historical responsibility of countries, frames outcome as historic	Cosmopolitanism, Polluter Pays
Private Sector	Stresses the historical responsibility of fossil fuel companies, proposes proceeds from tax on fossil fuels should be used to fill the fund	Cosmopolitanism, Polluter Pays
Consensus	Calls on all parties for more willingness to compromise, says that the term ‘reparations’ is divisive	
Affordability	Rejects the idea of a loss and damage fund, argues that it would be too expensive for developed countries and a burden on taxpayers	Communitarianism
Aid	States that developed nations are willing to provide financial support but frames this as aid, rejects the idea of compensation	Communitarianism (to some degree)
Eligibility	Highlights that the fund should only support the most vulnerable countries, increasingly wealthy emerging economies should be contributors rather than recipients	Polluter Pays, Ability to Pay
Self-interest	Argues that paying into a loss and damage fund would be in developed nations’ own interest, e.g., to prevent migration of climate refugees	Communitarianism
Denial	Denies historical responsibility of developed nations, highlights the positive effects of industrialisation	Communitarianism
Mosaic	Argues in favour of a ‘mosaic approach’ to fill the fund with money from existing finance instruments, developed nations, multilateral development banks	

It may seem like Mosaic and Private Sector are not mutually exclusive. This is because Mosaic emerged from another viewpoint called Existing Funds (Appendix 2.1.1) during the coding process. According to Hansen and Machin (2019:109), this is ‘perfectly feasible’ to account for new variables as they appear. While Existing Funds may have been more markedly different from Private Sector

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than Mosaic, there were no unclear instances during the coding. Statements advocating a mosaic approach did not specifically include companies; hence, I decided not to collapse Mosaic and Private Sector into one viewpoint.

My coding frame moreover contained 'identifier' categories (Hansen and Machin, 2019), such as the word count¹, type of article, and newspaper (Appendix 2.1, Variables 1-7). I also coded which climate-related terminology the articles use. For instance, 'climate crisis' conveys a greater sense of urgency than other terms (Kunelius and Roosvall, 2021). Furthermore, I attempted to address a crucial limitation of Benson's (2009) approach. Simply counting the occurrence of certain viewpoints does not account for articles that present one interpretation of an issue as more valid than others (Porto, 2007). Hence, I developed variables 10 and 11 (Appendix 2.1.1) to code whether an article endorses a viewpoint, for instance, by mentioning it in the headline. Similarly, variables 11 to 14 (Appendix 2.1) serve to assess whether any actors were evaluated positively or negatively. This might be the case if an actor is portrayed as a valuable contributor or, conversely, a disruption to achieving progress in the negotiations. As I was unable to find any existing operationalisations of Porto's (2007) point that a news story can arrange viewpoints or actors in a hierarchy, I used my own judgement for the respective coding instructions. This may limit the accuracy and reliability of these variables and exemplifies that constructing a coding frame involves subjective choices made by the researcher (Hansen and Machin, 2019).

Intercoder Reliability

To test the reliability and validity of my coding frame, I conducted a pilot study on a random sample of 20 articles and trained a second coder. As I encountered the 'Kappa paradox' (low Cohen's Kappa scores despite high percentage agreements), I decided to use another reliability coefficient, Gwet's AC1, which addresses this issue (Neuendorf, 2017). Most of my variables showed an 'almost perfect' agreement between the second coder and me, indicated by Gwet's AC1 values between 0.81 and 1 (Landis and Koch, 1977). Some variables, however, only obtained a 'substantial' agreement (0.61-0.8).

¹ This refers only to the word count of relevant sections, as many articles also covered other topics of COP27.

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These cases concerned the climate-related terminology and the evaluation of actors. I addressed the former by specifying that only the author's language is of interest rather than direct quotes. Regarding the latter, I changed the variable from salience given to certain actors (variables 13-16, Appendix 2.1.1) to positive and negative evaluation and added clearer instructions and examples to the coding frame. Lastly, the variable about the endorsement of viewpoints only obtained a Gwet's AC1 value of 0.41. As this is the lowest possible value for a 'moderate' agreement (0.41-0.6; Landis and Koch, 1977), I subsequently excluded the variable from my study. While this means that I was unable to assess whether a certain viewpoint is dominant at the article level, I still employed a method to measure the concentration of viewpoints at the newspaper level, as explained below.

Dictionary Selection

There are several dictionary-based tools to extract moral foundations from texts. The first of its kind is the Moral Foundations Dictionary (MFD; Graham, Haidt and Nosek, 2009). Updated versions include the MFD 2.0 (Frimer, 2022) and the MoralStrength lexicon (Araque, Gatti and Kalimeri, 2020). However, none of them measure the liberty foundation, which was added later to the theory. Initially, I intended to combine the newly developed LibertyMFD (Araque, Gatti and Kalimeri, 2022), which only assesses the liberty foundation, with the MoralStrength lexicon to capture all six foundations. However, the LibertyMFD does not exist as a Python package yet, which made it impossible for me to use. I instead opted for the extended Moral Foundations Dictionary (eMFD; Hopp *et al.*, 2021). This was partly due to the availability of a Python code accompanied by a helpful tutorial. Furthermore, the eMFD addresses several shortcomings of previous versions. For instance, while the original MFD was developed by a small group of experts, the eMFD follows a crowd-sourced approach (see Appendix 2.2). The dictionary includes 3270 words, each assigned probabilities for their relevance for each moral foundation and vice and virtue scores, indicating the direction of moral sentiment (moral violation or moral righteousness).

Data Analysis

Since I was able to analyse the entire population of relevant articles from the selected newspapers, there was 'no need for inferential statistics' (Neuendorf, 2017:245). My results are mostly based on

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descriptive statistics, although I also conducted some simple linear regression analyses to test potential predictors of viewpoint diversity.

Furthermore, I determined 'concentration indices' for the viewpoints, actors, and moral foundations, respectively, to quantify the internal pluralism of each newspaper. This follows a method employed by Benson (2009:410). He adopted the so-called Herfindahl-Hirschman Index, originally a measure for market concentration, to assess 'the extent to which news coverage is concentrated or dispersed relatively evenly' across the categories of interest. The indices range from 0 to 1, with a high index indicating high concentration. External pluralism was measured for each country and refers to the 'average 'gap' between the extremes' (Benson, 2009:412). This describes the gap between those newspapers that reference a viewpoint, actor, or moral foundation the least and those that reference it the most (see Appendix 2.3 for further explanations and Appendix 3, Tables 2-4 for the percentages used in the calculations).

On a conceptual note, this method fits into Stirling's (2007) dimension of *balance*. Diversity is hence understood in terms of how equal the distribution of categories is. While this is linked to the idea of *open diversity* (McQuail, 1992), it can be contested on normative grounds. For instance, it is questionable whether the denial of historical responsibility deserves equal attention in the debate around loss and damage as other views. However, as discussed in the literature review, the Denial viewpoint constitutes a philosophical objection to the most important principle, namely Polluter Pays. I included it also for exploratory purposes to evaluate which role Denial plays in the media representation of this debate. Despite normative weaknesses, the concentration indices are useful to quantify internal pluralism and compare it across newspapers and media systems.

Ethics and Reflexivity

Despite its representation as a controversy in Western media, it is important to remember that loss and damage is an ethical issue rooted in human and planetary suffering (Wallimann-Helmer *et al.*, 2019). Therefore, it requires researchers to be mindful of the real-world consequences of the negotiations and to consider power imbalances between the stakeholders. This is especially relevant to me as someone from a high-polluting, Western country. Hence, I educated myself about the experiences of people affected by climate-related losses and damages. I furthermore reflected on my

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own biases. As I care a lot about climate justice, my beliefs may have impacted how I perceived the coverage. For instance, I identified fewer viewpoints that fully support a loss and damage fund than vice versa. It is possible that I overlooked further arguments in favour of the fund and subconsciously interpreted them as a fact rather than a viewpoint. This suggests that my coding frame may not reflect the entire 'ideological range of debate' (Benson, 2009:408).

RESULTS

This chapter presents the results of my data analysis, starting with a brief note on the population distribution and the exclusion of some variables. I will then outline the findings for each of the three hypotheses as well as for potential predictors of news diversity. This serves to answer the following research question:

How do British and Irish newspapers compare in terms of the diversity of viewpoints, actors, and moral foundations reflected in their coverage of the COP27 negotiations about loss and damage?

Firstly, as Figure 1 shows, the amount of coverage is distributed unevenly across the period of analysis. The two large peaks correspond respectively to the first few days of COP27, when loss and damage was officially included in the agenda, and the adoption of the final agreement at the end of the summit. There is also considerable variation between the newspapers in terms of the number of articles published on loss and damage (see Table 3, first column).

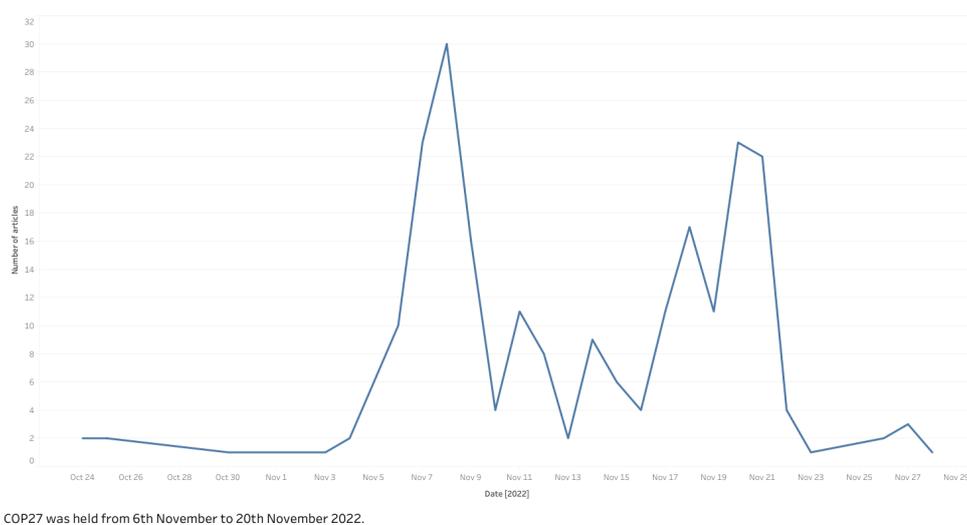


Figure 1: Population distribution across the period of analysis

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It should moreover be noted that I excluded the Self-interest and Denial viewpoints from the index calculations after an initial analysis. The former does not appear to be an important aspect of the overall debate as it was only mentioned in eleven articles from three newspapers (many of which referenced the same statement by a British MP). Denial, on the other hand, was not used by any newspaper except the Daily Mail. It was referenced in nine Daily Mail articles which constitute 45% of its coverage on the issue. Including the Denial viewpoint would have disproportionately inflated the British external pluralism. Furthermore, I excluded the actor categories Business and Indigenous Communities from the analysis as they were less relevant than originally assumed, having both been quoted in only two articles.

Internal Pluralism

The first hypothesis concerns the internal pluralism of the eight newspapers:

H1: The British newspapers will exhibit lower levels of internal pluralism in terms of viewpoints (H1a), actors (H1b), and moral foundations (H1c) than the Irish newspapers.

Starting with H1a, Table 3 gives an overview of the number of articles per newspaper that referenced each viewpoint. Polluter Pays occurs most frequently in all newspapers. For five newspapers, Eligibility is the second most referenced viewpoint. The variation in the use of the remaining viewpoints is greater. For instance, Affordability appears in half of the articles from The Daily Mail and The Irish Mirror, and in a quarter of those from The Times, while it is among the least referenced viewpoints in all other newspapers. In terms of the average number of viewpoints referenced per article, the differences between most newspapers are moderate, whereas The Times and The Daily Mail stand out as the only outlets with a mean above two.

Table 3: Viewpoint distribution

Newspaper	Polluter Pays	Private Sector	Consensus	Affordability	Aid	Eligibility	Mosaic	No. of views per article
The Independent (71)	64	8	14	3	2	9	5	1.48
The Guardian (68)	63	13	10	4	9	15	10	1.82
The Times (20)	18	6	7	5	2	10	3	2.55
The Daily Mail (20)	12	3	2	10	9	11	1	2.4
The Irish Independent (17)	16	5	0	0	0	6	4	1.82
The Irish Times (15)	13	2	2	0	1	6	4	1.87
The Irish Examiner (19)	17	3	3	0	0	1	2	1.37
The Irish Mirror (4)	4	0	0	2	0	0	1	1.75

Number of articles per newspaper in brackets

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This tendency is reflected in the newspapers' Viewpoint Concentration Indices (VCI). With a VCI of 0.08 and 0.07, respectively, The Times and The Daily Mail are by far the least concentrated in terms of viewpoints (Table 5). While The Independent's VCI (0.31) is higher than that of the Guardian (0.19), their scores are within the range of the Irish newspapers' VCIs (0.18 - 0.37). As a result, the UK's representation of viewpoints is more balanced on average, with a VCI of 0.16 for British newspapers compared to a mean of 0.28 for Irish newspapers. A higher VCI indicates lower internal pluralism, hence, H1a is rejected.

Moving on to H1b, the distribution of actors in the coverage is generally more even than that of viewpoints (Table 4). Among the most quoted actor categories are Civil Society and Small Island Nations, pertaining to The Independent and The Guardian, and National Politics, in the case of The Daily Mail and all Irish newspapers. The Guardian leads in terms of the average number of actors quoted per article, followed by The Times.

Table 4: Actor distribution

Newspaper	COP presidency	International Institutions	Global Politics	National Politics	Small Island Nations	Developing Countries	BRIC	Developed Countries	Research	Civil Society	No. of actors per article
The Independent (71)	4	17	1	8	18	12	4	10	7	30	1.85
The Guardian (68)	5	25	11	2	25	19	8	19	22	26	2.80
The Times (20)	3	7	2	4	8	4	0	2	3	4	2.47
The Daily Mail (20)	3	3	1	11	4	1	2	3	0	4	1.88
The Irish Independent (17)	0	1	2	8	1	2	0	1	2	4	1.31
The Irish Times (15)	1	2	1	7	0	3	0	2	2	6	2.00
The Irish Examiner (19)	3	4	0	8	0	1	0	2	2	7	1.69
The Irish Mirror (4)	0	0	1	3	0	0	0	1	0	1	1.50

Number of articles per newspaper in brackets

Furthermore, please note: Some articles did not quote or paraphrase any actors. In most cases, this can be explained by a very low word count or the type of article (opinion pieces often did not feature any actors). The average number of actors per article therefore refers only to articles that quoted or paraphrased at least one actor.

As a result, with a score of 0.03, The Guardian has the lowest Actor Concentration Index (ACI) of all newspapers (Table 5). There is no overlap between the British and Irish ACIs, as the Irish newspaper with the lowest value (The Irish Times, 0.1) still ranks minimally higher than the British newspaper with the highest value (The Daily Mail, 0.09). While the Irish Mirror pulls the Irish mean up with its high ACI of 0.26, it does not count as an outlier according to the statistical formula. Hence, the UK's mean ACI of 0.06 is significantly lower than that of Ireland, which is 0.15. So, regarding the representation of actors, the British newspapers are more internally pluralist than their Irish counterparts, meaning that H1b must be rejected.

Table 5: Concentration indices

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Newspaper	Viewpoint Concentration Index	Actor Concentration Index	Moral Foundations Concentration Index
The Independent	0.31	0.06	0.12
The Guardian	0.19	0.03	0.13
The Times	0.08	0.04	0.11
The Daily Mail	0.07	0.09	0.12
The Irish Independent	0.24	0.13	0.13
The Irish Times	0.18	0.10	0.13
The Irish Examiner	0.37	0.11	0.14
The Irish Mirror	0.33	0.26	0.14

Normalised indices, rounded to two decimal places

Lastly, regarding H1c, Figure 2 shows the mean foundation probabilities for each newspaper, meaning the probability that the language in an article is linked to a certain moral foundation². There is very little variation among the newspapers, as all of them represent the care foundation the most and the fairness foundation the second most. Notably, though, The Times and The Daily Mail exhibit the two lowest values for the care foundation whereas the 0.07 mark is only exceeded by three of the Irish newspapers (see Appendix 3, Table 2 for the exact numbers). Moreover, the foundation probabilities can be split into vice and virtue categories, revealing that the dominance of the care foundation is owed to its extraordinarily high vice probabilities. The authority foundation also scores higher on vice than on virtue probabilities (Appendix 3, Figures 2 and 3).

Given the distribution shown in Figure 2, it is unsurprising that there is little variation in the newspapers' Moral Foundations Concentration Indices (MFCI). For all eight newspapers, they range from 0.11 to 0.14. Despite this small range, it is noticeable that the mean MFCI for British newspapers is slightly lower than that for Irish newspapers. At an MFCI of 0.119, the UK's representation of moral foundations is slightly more balanced than that of Ireland with an MFCI of 0.135. Hence, H1c is also rejected.

² For an explanation as to why the probabilities may seem rather low, see Appendix 2.2.

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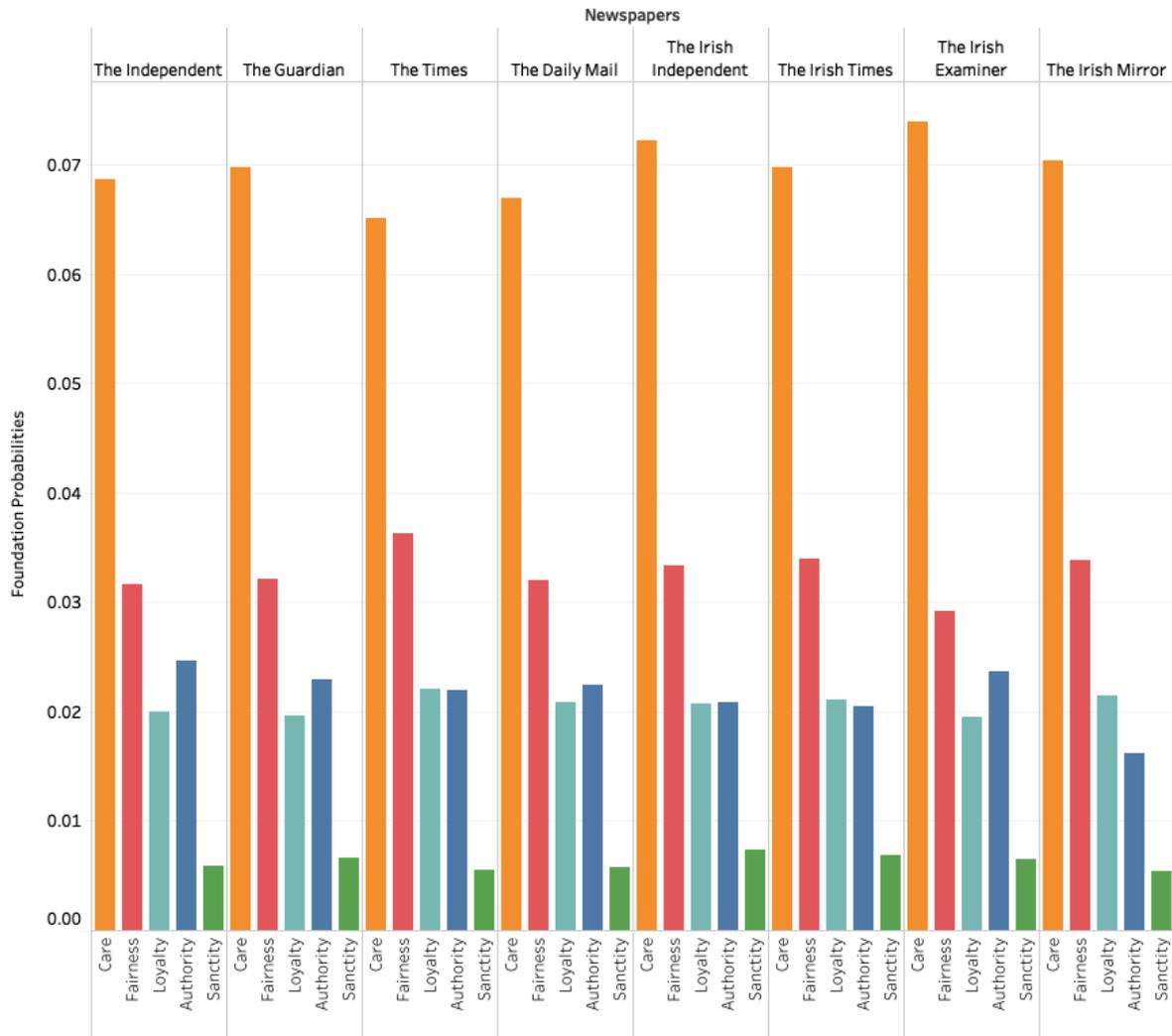


Figure 2: Moral foundation probabilities

So, none of the sub-dimensions of H1 have been corroborated, meaning that H1 must be rejected altogether.

External Pluralism

The second hypothesis contains the same sub-dimensions but requires them to be assessed at the level of external pluralism:

H2: The British newspapers will exhibit higher levels of external pluralism in terms of viewpoints (H2a), actors (H2b), and moral foundations (H2c) than the Irish newspapers.

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The results for Ireland are somewhat distorted due to the small population from The Irish Mirror. Its four articles do not reference certain viewpoints or actors at all which enlarges the Irish external pluralism for both sub-dimensions. Additionally, The Irish Mirror exhibits the highest variance of foundation probabilities (Appendix 3, Table 2). This can affect the precision of its mean scores and the comparison with other newspapers. Excluding The Irish Mirror from the analysis would arguably not undermine our understanding of the Irish coverage overall. Hence, I will report Ireland's external pluralism both including and excluding The Irish Mirror.

Table 6: External Pluralism

Country	Viewpoints	Actors	Moral Foundations
UK	15.2	11.4	2.1
Ireland incl. Irish Mirror	15.3	11.3	2.7
Ireland excl. Irish Mirror	9.6	6.6	1.8

External pluralism is reported in percentage points.

As Table 6 shows, whether H2 is confirmed or rejected is not apparent if The Irish Mirror is included. Once it is excluded, however, the UK sample exhibits higher levels of external pluralism for all sub-dimensions. The difference between the countries is the largest for the representation of viewpoints, at 5.6 percentage points³, followed by that of actors, at 4.8 percentage points. Regarding the representation of moral foundations, the difference between the British and Irish samples is very small at only 0.3 percentage points. This is in line with the finding that the newspapers' MFCIs were very similar while their VCI varied the most.

So, H2 can be corroborated overall albeit noting that the difference in external pluralism varies depending on the sub-dimension. Another caveat is that The Irish Mirror was excluded from this analysis.

The Relationship between VCI, ACI, and MFCI

Next, the third hypothesis is about how the different types of concentration might interact:

³ 'Percentage points' is used as a unit of measurement rather than a relative comparison as the results for external pluralism are reported in percent.

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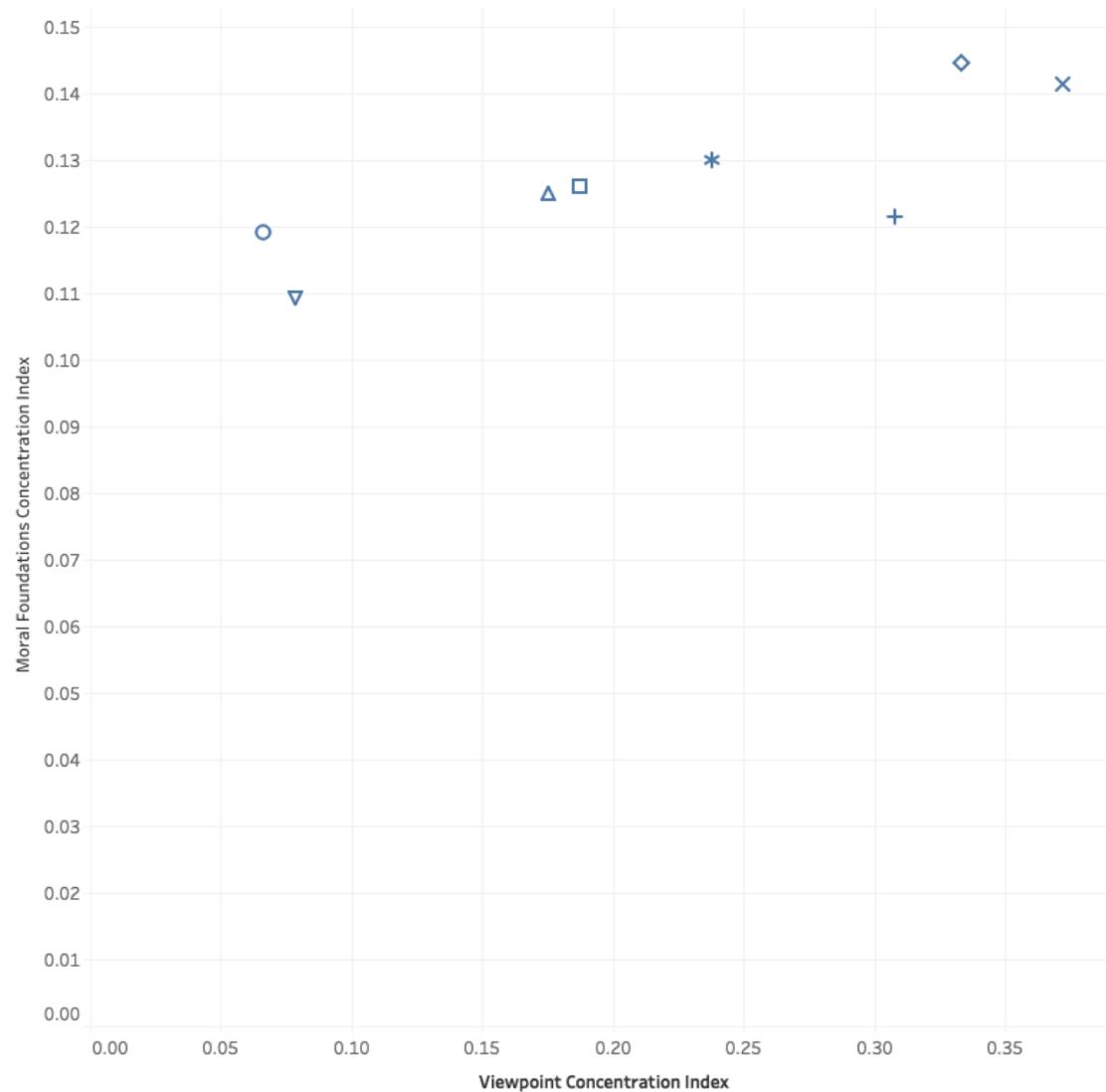
H3: There is a positive relationship between a newspaper's internal pluralism in terms of viewpoints (H3a) and actors (H3b) and its internal pluralism in terms of moral foundations.

Since I only measured internal pluralism at the newspaper level rather than the article level, my data set of eight newspapers was too small to perform a linear regression analysis. This would have been insightful to predict how a change in a newspaper's VCI or ACI might affect its MFCI. I instead measured the association between the concentration indices by determining their correlation coefficients. The visualisations in Figures 3 and 4 suggest that there is a linear component to the relationships of interest. Hence, it was reasonable to use Pearson's correlation coefficient which assumes linearity.

Regarding H3a, Figure 3 shows that newspapers with a high VCI tend to have a relatively high MFCI, too. This is reflected in the Pearson's correlation coefficient of the two variables which is 0.82. So, there is a very strong positive correlation between the concentration of viewpoints and of moral foundations which are represented in the coverage of the loss and damage negotiations.

A similar yet weaker pattern is observable in Figure 4 regarding H3b as there is slightly more deviation from an imaginary 'line of best fit' than in Figure 3. Pearson's correlation coefficient between the newspapers' ACIs and MFCIs is 0.77 which still constitutes a strong positive correlation. I additionally identified a moderate positive correlation (0.51) between the concentration of actors and viewpoints.

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- Newspaper**
- + The Independent
 - The Guardian
 - ▽ The Times
 - The Daily Mail
 - * The Irish Independent
 - △ The Irish Times
 - × The Irish Examiner
 - ◇ The Irish Mirror

Figure 3: Relationship between the VCI and MFCI

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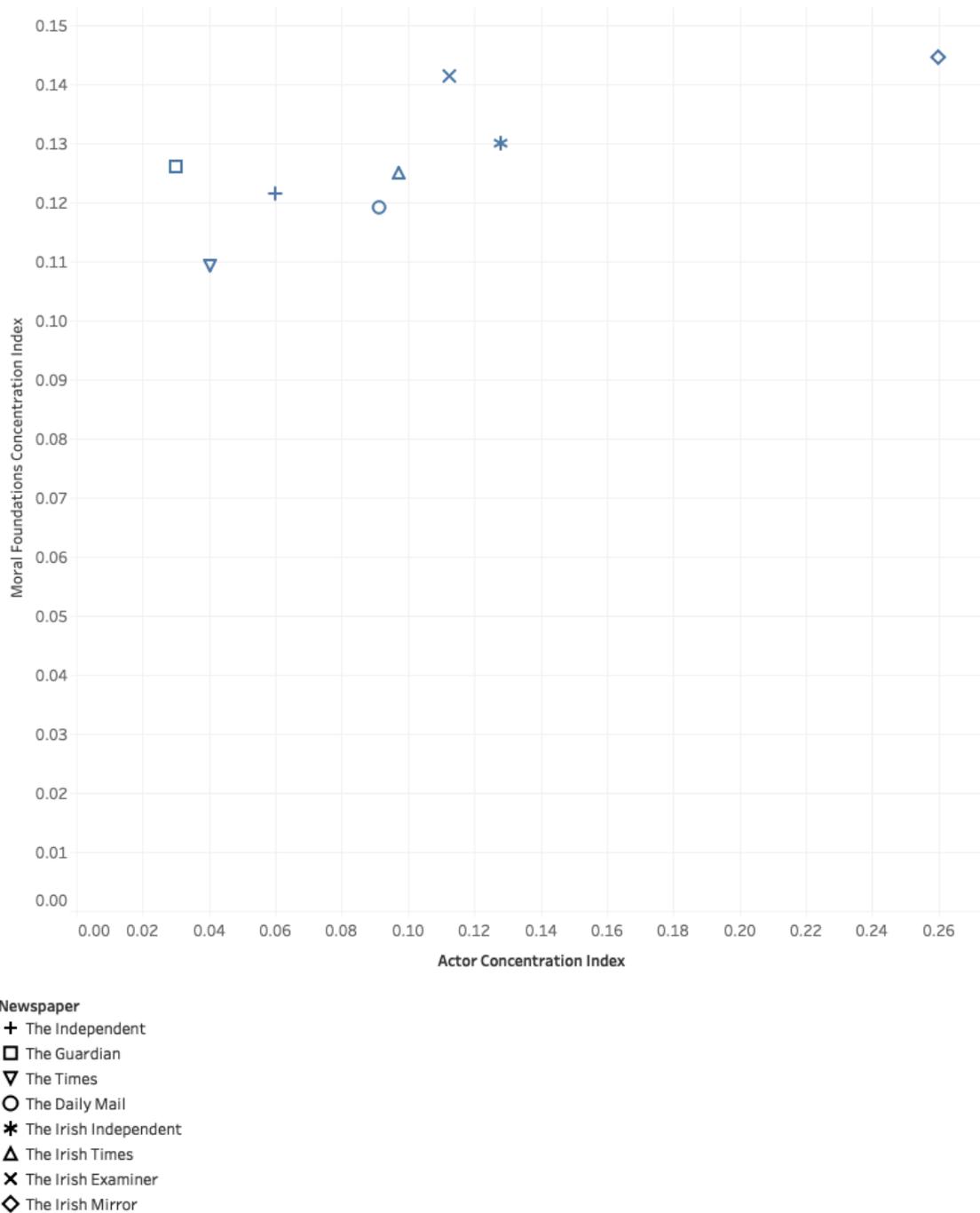


Figure 4: Relationship between the ACI and MFCI

So, H3 is corroborated while it should be acknowledged that the internal pluralism of moral foundations is slightly more strongly correlated with the internal pluralism of viewpoints than with that of actors.

Moreover, while I detected a positive relationship between the *concentration* of these sub-dimensions at the newspaper level, the same cannot be stated about their *presence* at the article level. As Tables 5

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and 6 in Appendix 3 show, there are only very weak correlations⁴ between the foundation probabilities and the presence of the viewpoints and actors. This might be the case because the newspapers varied substantially in their use of viewpoints and actors but exhibited similar levels of foundation probabilities.

Predictors of Actor and Viewpoint Diversity

In addition to testing my three hypotheses, I was interested in exploring some of the factors that may affect actor and viewpoint diversity, as discussed in the literature review. Hence, I performed simple linear regressions based on the number of actors and viewpoints that are referenced in each article.

Table 7: Simple linear regression results

Response Variable	Explanatory Variable	R-squared	Coefficient	Std. Error of Coefficient
Actor Count	Word Count	0.393	0.950	0.000
	Opinion Piece	0.145	-1.717	0.273
Viewpoint Count	Actor Count	0.167	0.243	0.036
	Word Count	0.196	0.400	0.000
	Opinion Piece	0.016	-0.342	0.174

P-values are not reported as my study was exhaustive of the population of relevant articles. The coefficients for word count are multiplied by 500. Their standard errors are so small that they were given as 0.000 in the python output, hence the same numbers are reported here despite the multiplication of their coefficients.

As Table 7 shows, the explanatory variables can explain the variability in actor and viewpoint diversity only to a limited extent. In both cases, an article's word count is the best predictor available, albeit weak (R-squared = 0.196) for the number of viewpoints and moderate (R-squared = 0.393) for the number of actors. For each additional 500 words, the expected number of actors quoted in an article increases by nearly one. Conversely, even an increase in word count by 1000 does not predict the addition of another viewpoint (coefficient = 0.4). Similarly, it would take four additional actors to expectedly increase the number of viewpoints in an article by one. Lastly, while opinion pieces

⁴ I used the point biserial correlation here as the viewpoints/actors are dichotomous and the foundation probabilities are continuous variables.

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decrease the expected number of viewpoints and actors, this variable explains very little variability, especially regarding viewpoint diversity.

As noted in the methodology chapter, I also coded other variables such as the use of different climate-related terms and the evaluation of actors. However, they will not be presented in-depth as they are not central to answering my research question and did not yield any significant results. There are no notable correlations between the climate-related terms and viewpoints (Appendix 3, Table 8; see Appendix 3, Table 7 for the proportional distribution of terms). It did stand out that most of the positive evaluations concerned actors that are in favour of the loss and damage fund (e.g., Civil Society, Small Island Nations) and most negative evaluations targeted opponents of the fund, such as developed countries. I moreover performed simple linear regressions using the positive and negative evaluations of actors as explanatory variables for the moral sentiment of articles (virtue and vice probabilities, respectively). However, they were found to be ineffective predictors.

Answering the Research Question

'Diversity', as mentioned in the research question, was assessed on the levels of internal and external pluralism. The analysis has shown the British coverage to be simultaneously more internally as well as externally pluralist than the Irish coverage (if *The Irish Mirror* is excluded for external pluralism). While this is the case for all measured sub-dimensions of news diversity, the differences between the countries were the most pronounced for the representation of viewpoints and the least pronounced for the representation of moral foundations. The latter may be explained by the little variation in the moral language used by the newspapers. Nevertheless, newspapers that exhibit a concentrated coverage in terms of viewpoints or actors will generally also be relatively concentrated in their use of moral foundations. These findings raise several implications which will be discussed in the next chapter.

DISCUSSION

This chapter discusses the most significant findings and limitations of this study in relation to the previously reviewed literature, concluding with implications for further research.

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Population Distribution across the Newspapers

The distribution of articles across the period of analysis (Figure 1) reflects approximately an 'issue-attention cycle' (Priest, 2016). Accordingly, there was virtually no public interest in loss and damage before the issue was included on the COP27 agenda. Media coverage rises sharply at the start of the summit yet drops as negotiations proceed to the technicalities of a potential solution. Once an agreement is in sight, media attention is reactivated, however, the issue quickly disappears from public consciousness in the aftermath of COP27. The relatively low total number of articles (234) derived from eight national newspapers suggests that public interest in loss and damage was low even during the visualised peaks. Moreover, it is striking that the British newspapers published more than three times as many articles about loss and damage than the Irish newspapers. This is due to the large number of articles from *The Guardian* and *The Independent* (a total of 139) and the very low number of articles from *The Irish Mirror*. The latter was already the next best alternative to *The Irish Daily Mail* which published no articles on the topic. This confirms Laksa's (2014) finding that left-leaning, broadsheet papers tend to cover climate ethics a lot more extensively than their counterparts. Moreover, a funding crisis in the Irish news industry has left 'environmental topics pushed down the media agenda' and newsrooms short of environmental correspondents which likely reduces their coverage of COP27 (Robbins, 2020:174).

Lower Internal Pluralism in Irish Newspapers

There are multiple avenues to explain why, contrary to my first hypothesis, the Irish newspapers exhibit lower levels of internal pluralism than the British newspapers.

Firstly, Irish climate change coverage tends to centre around party politics (Robbins, 2020). This was demonstrated by the prominence accorded to national politicians. While only 14% of articles from British newspapers quoted national politicians, it was 47% for the Irish newspapers. The newsworthiness of reporting on loss and damage tended to be based on speeches held by the Taoiseach or the Irish environment minister. Since both supported the loss and damage fund, many Irish articles featured the Polluter Pays and Private Sector viewpoints without presenting opposing views. For instance, *The Irish Mirror* is the only Irish newspaper that referenced the Affordability viewpoint at all. This 'passivity' in covering official accounts (Robbins, 2020:174) might be owed to

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the fact that Ireland fits better than the UK into Hallin and Mancini's (2004) 'Liberal' model which is characterised by event-based reporting. In the UK, on the other hand, the debate about loss and damage may be more controversial and hence provoke a wider range of reactions which are reflected in the coverage. This is because the demand for compensation resembles the debate around reparations for slavery. Additionally, the fact that the UK bears a greater historical responsibility for causing climate change may make loss and damage more of a touchy subject than in Ireland. This suggests that, firstly, the COP coverage of newspapers from different countries reflects national particularities (Lück *et al.*, 2018a) and, secondly, a high national relevance of a given topic enhances news diversity.

The tendency of the Irish coverage to focus on national politicians also contributes to its lower actor diversity. The second most quoted actor category was Civil Society, however, most of these actors represented Irish NGOs rather than international NGOs which was more common in the British coverage. Representatives of Small Island Nations, a key actor category for covering loss and damage, were not quoted at all by three Irish newspapers. This points towards a crucial structural difference between the Irish and British newspapers. The resources available to media outlets impact the news diversity of their coverage (Humprecht and Büchel, 2013). Irish newspapers are 'modestly sized' and lack the resources for extensive 'boots-on-the-ground reporting' (Robbins, 2020:177/8). This suggests that Irish journalists struggle to build and maintain relationships with a range of sources from around the world, unlike their colleagues who are able to attend COPs (Lück *et al.*, 2018b). In contrast, The Guardian and The Times, the newspapers with the lowest ACI scores, sent journalists to Sharm el-Sheikh and commissioned delegates from the Global South to write for them. In addition to the resources of newsrooms, another potential determinant of actor diversity is the length of articles, as discussed in the previous chapter. The articles from British newspapers were longer or rather contained longer sections about loss and damage, with a difference of 192 words between the country means. It is worth noting, however, that the British mean is raised by several live blogs published by the Guardian that are typically much longer than other types of articles.

Another reason for the low internal pluralism of Irish newspapers, especially regarding viewpoint diversity, lies in the construction of my coding frame. It contained only two viewpoints that fully support a loss and damage fund without any caveats. Polluter Pays functioned as an umbrella

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category for all general expressions of support that did not make specific proposals for the operationalisation of the fund. This helps to explain the higher concentration of viewpoints exhibited by The Independent and three of the Irish newspapers compared to The Guardian. Even though they all referenced Polluter Pays in approximately 90% of their articles, the coverage of The Guardian tended to go beyond merely attributing responsibility to large polluters. It frequently discussed in a nuanced manner how the money for the fund could be mobilised (Eligibility, Mosaic) and contextualised the need for the fund by the shortcomings of existing climate finance instruments. Not all the statements relating to the latter are captured by the viewpoint categories that I defined. This suggests that The Guardian and perhaps The Independent and the Irish newspapers too may have gotten lower VCIs had I identified more distinct viewpoints that advocate for the fund.

In turn, the fact that the British coverage seems more balanced overall is owed to the low VCIs of The Times and The Daily Mail. While both presented on average more views than other newspapers, they used them to oppose the fund on numerous grounds which was particularly salient in the coverage of the Daily Mail. It is questionable whether this kind of viewpoint diversity is desirable for a productive discourse about loss and damage. This suggests that my coding frame failed to ensure 'that coded frames represent meaningfully different interpretations' (Baden and Springer, 2017:181). Moreover, it should be noted that The Daily Mail is the only newspaper from my sample that consistently rejected the idea of a loss and damage fund. While The Times published an opinion piece arguing against 'climate change reparations', its articles more often supported the fund implicitly or explicitly. Hence, I must acknowledge that the coverage of The Daily Mail led me to overestimate the relevance of the Denial viewpoint and perceive the debate around loss and damage as perhaps more controversial than it is. This suggests that my inductive approach would have benefitted from defining a population first and considering the proportion of total coverage that each newspaper accounts for.

The Relationship between Internal and External Pluralism

The results regarding external pluralism may have been impacted by an overall left-skew of my sample of Irish newspapers. Firstly, Irish journalists generally tend to position themselves further on the political left than British journalists. The survey that this is based on moreover shows a lower

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standard deviation for the Irish respondents (Corcoran, 2004). This suggests that there might be more agreement about moral issues such as loss and damage among Irish journalists working for different media outlets. Secondly, the Irish sample contained three left-leaning newspapers. One could argue that this contributed to Ireland's lower score in external pluralism. However, the right-leaning Irish Independent did not differ notably in its representation of viewpoints from the other newspapers while there was a pronounced disparity in the British sample. This confirms the finding from Dirikx and Gelders (2010) that newspapers' editorial positions have a greater impact on their climate change coverage in media systems characterised by political parallelism. Nevertheless, while hypothesis 2 regarding external pluralism was corroborated, hypothesis 1 was not supported by my results. This conflicts with McQuail's (1992) theory that internal pluralism is low in externally pluralist systems. A part of this contradiction can be explained by the construction of my coding frame, as discussed above. Yet it appears that the relationship between internal and external pluralism is not as straightforward as assumed and therefore deserves further scholarly exploration.

Diversity of Moral Language

Regarding the representation of moral foundations in the articles, some aspects of my results are consistent with previous studies while others raise new questions.

Firstly, the observation that the moral language in all newspapers is dominated by the care and, to a lesser extent, fairness foundations is unsurprising as environmental discourses and coverage of climate change tend to be based on these values (Feinberg and Willer, 2013; Song *et al.*, 2022). The probabilities for the care foundation are mostly derived from vice-related words. This might be due to the reasons commonly given in support of a loss and damage fund, such as the harm that climate disasters are causing in vulnerable countries. Similarly, regarding the authority foundation, all newspapers exhibit substantially higher probabilities for the vice category than for virtue. This is consistent with what Song *et al.* (2022) found and, according to them, may be an effect of the articles criticising policies and governments. However, I did not find the negative evaluation of actors to predict higher vice probabilities for any foundation. A potential reason for this is that the evaluation of an actor was often just a short reference which might have a limited effect on the overall moral

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sentiment of an article. An additional issue with the evaluation of actors is that these variables only obtained a 'substantial agreement' in the pilot study which may inhibit their validity.

Moreover, the tendency of conservative newspapers to score higher on the binding foundations (Fulgoni *et al.*, 2016) was not apparent in my results. This might be the case because these foundations only constitute a small proportion of the overall moral language in the articles, perhaps rendering variation somewhat random. However, regarding the more relevant care foundation, two patterns are observable. Firstly, The Times and The Daily Mail exhibit the two lowest values. This is in line with Fulgoni *et al.*'s (2016) finding that right-leaning newspapers use the care foundation less than left-leaning newspapers. Secondly, except for The Irish Times, which is on the same level as The Guardian, the Irish newspapers score higher on the care foundation than the British newspapers. I suspect this to be a main contributor to Ireland's comparatively higher mean MFCI. Originally, I hypothesised that the Irish newspapers would be more internally pluralist in terms of moral foundations, as Hopp *et al.*'s (2021) finding implies that centrist news outlets exhibit a more balanced moral language. However, the newspapers with the lowest MFCIs, 0.109 and 0.119, respectively, are The Times and The Daily Mail. This suggests that conservative newspapers, similarly to conservative individuals, adopt a broader set of moral foundations (Graham, Haidt and Nosek, 2009). In this case, however, it might have to do more with their relatively low care probabilities than with the distribution of other foundations.

It seems moreover plausible that the slightly higher concentration of moral foundations in the Irish newspapers, especially regarding the care foundation, is due to their strong representation of viewpoints and actors that advocate for a loss and damage fund. This is supported by the strong positive relationships between the newspapers' ACIs as well as VCIs and their MFCIs. However, I did not find any notable correlations between the actors and viewpoints, respectively, and moral foundations at the article level. To explain and reassess this paradox, more studies that integrate Moral Foundations Theory into news diversity research may be needed.

The Relationship between Actor and Viewpoint Diversity

Existing studies (e.g., Masini and Van Aelst, 2017) have found the relationship between actor and viewpoint diversity to be positive which is reflected in my results. However, one does not necessarily

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lead to the other. At the newspaper level, I found only a moderate positive correlation (0.51) between the concentration of actors and viewpoints. This is because the levels of concentration regarding both dimensions do not line up for all the newspapers. For instance, The Independent has the third highest VCI (0.31) but the third lowest ACI (0.06). This exemplifies that 'there is no guarantee' of actor diversity enhancing viewpoint diversity (Voakes *et al.*, 1996:591). Moreover, the simple linear regression showed that it would take four additional actors to be quoted in an article to predict the inclusion of one additional viewpoint. This suggests that it might be common for articles to quote actors from various fields that nonetheless 'advance similar frames' (Baden and Springer, 2017:178).

Implications for Further Research

Future studies can advance the present research by addressing the limitations outlined above and in the methodology chapter. This includes selecting an equal number of right-leaning and left-leaning newspapers and defining a minimum number of articles per newspaper that must be met. The coding frame can be improved by identifying more viewpoints in support of the fund. Furthermore, this study can be extended in two directions. Firstly, while I compared the news coverage of loss and damage in Western media, it would be insightful to also analyse how this topic is represented in countries that will be recipients of the fund. Their coverage might stress other moral foundations as morality in collectivist societies relies more strongly on the binding foundations (Haidt, 2013). Secondly, irrespective of the topic of analysis, this research can provide the starting point for other studies to integrate Moral Foundations Theory into a news diversity framework. Once the LibertyMFD is available as a Python package, the liberty foundation should be included in the analysis. Moreover, maybe other researchers can find a way to measure the concentration of viewpoints, actors, and moral foundations at the article level. Alternatively, including many more newspapers in the sample could serve to test the relationship between the concentration indices through predictive modelling. Lastly, I was unable to reliably code whether articles endorsed a viewpoint. Hence, a robust operationalisation of articles that arrange viewpoints 'in a hierarchy so that one is preferred over the other(s)' is still needed (Porto, 2007:315). One approach could be to code how many times an article references each viewpoint.

CONCLUSION

This study aimed to test the existing theory that media systems exhibiting high levels of political parallelism are characterised by low internal and high external pluralism. I followed a novel approach by integrating Moral Foundations Theory into a news diversity framework. This allowed me to measure quantitatively how balanced the representation of actors, viewpoints, and moral foundations is in the British and Irish coverage of the COP27 negotiations about loss and damage. Through the thematic focus on climate ethics, I moreover attempted to fill a gap in the literature on climate change coverage.

The results reveal that the British newspapers are simultaneously more internally and externally pluralist than the Irish newspapers. This challenges McQuail's (1992) assumption that high external pluralism goes hand in hand with low internal pluralism. The comparatively low actor diversity of Irish newspapers can be explained by their low resources and their focus on domestic sources. Moreover, the presumably higher national relevance of loss and damage in the UK might explain the greater viewpoint diversity of British newspapers (Humprecht and Büchel, 2013). The level of controversy associated with the issue is also a determinant of external pluralism as the ideologies of newspapers impact their climate change coverage only for topics that are subject to 'due discussion' (Dirikx and Gelders, 2010:201).

Regarding the representation of moral foundations, I hypothesised the Irish newspapers to be more internally pluralist due to their less partisan nature. However, I found the opposite, as *The Times* and *The Daily Mail* exhibit the lowest concentration of moral foundations. This suggests that right-leaning newspapers use a broader set of moral foundations, as is the case for right-leaning individuals (Graham, Haidt and Nosek, 2009). Nevertheless, the newspapers showed little variation in their use of moral language, with the care foundation being represented by far the most in all of them. Despite the resulting small differences in the newspapers' concentration of moral foundations, I found the latter to be strongly positively correlated with the concentration of actors and viewpoints.

The outcomes of this study have inevitably been influenced by some conceptual and methodological shortcomings which future studies should consider. A main weakness is that the coding frame includes more viewpoints against the fund than in favour of it which boosted the viewpoint diversity

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of The Times and The Daily Mail. Furthermore, the chosen method only allowed me to measure concentration at the newspaper level. Nevertheless, this study sets the stage for further research into the coverage of climate ethics and the role of moral language in relation to actor and viewpoint diversity.

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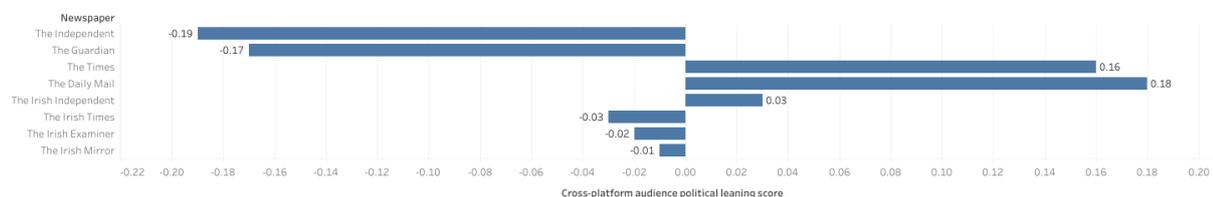
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APPENDICES

APPENDIX 1 - Audience polarisation in the country samples

Appendix Figure 1: Cross-Platform Audience Political Leaning Scores



Scores taken from Fletcher, Cornia and Nielsen (2020)

APPENDIX 2 – Methodology

2.1 Coding Frame and Coding Instructions

1. ID number
2. Headline
3. Date of publication (day/month/year)
4. In which country is the article published?
 1. UK
 2. Ireland
5. Name of newspaper
 1. The Independent
 2. The Guardian (this includes the Observer)
 3. The Times (this includes the Sunday Times and times.co.uk)
 4. The Daily Mail (this includes MailOnline and the Mail on Sunday)
 5. The Irish Independent (this includes the Sunday Independent)
 6. The Irish Times
 7. The Irish Examiner
 8. The Irish Mirror
6. How long is the article? (Enter the combined word count of sections about loss and damage only)
7. What type of article is it?
 1. News item
 2. Opinion piece
 3. Live blog
8. Are the following terms used to refer to climate change? (no = 0, yes = 1; this does *not* include direct quotes, job titles or treaty names)
 - a) Climate change
 - b) Global warming
 - c) Climate crisis
 - d) Global heating
 - e) None of these
9. Are the following viewpoints about loss & damage mentioned in the article? (no = 0, yes = 1)
 - a) 'Polluter pays'
 - b) Private sector
 - c) Consensus

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- d) Affordability
 - e) Aid
 - f) Eligibility
 - g) Self-interest
 - h) Denial
 - i) Mosaic
 - j) None of these
10. Are actors from the following fields quoted and/or paraphrased about loss & damage (excluding any other topic)? (no = 0, yes = 1)
- a) President of COP (Sameh Shoukry, also former president Alok Sharma)
 - b) International institutions (EU, UN (this includes IPCC))
 - c) Global politics (globally known politicians, excluding those from UK/Ireland)
 - d) National politics (of UK and Ireland)
 - e) Small Island Nations
 - f) Other vulnerable countries (developing countries excluding small islands)
 - g) BRIC (Brazil, Russia, India, China)
 - h) Developed Countries (other than British/Irish politicians)
 - i) Research (universities, think tanks, experts, research institutes)
 - j) Civil society (NGOs, activists, campaigners)
 - k) Business (businesses and business lobbying organisations)
 - l) Indigenous people
 - m) None of these
11. Are any of the actors evaluated positively (explicitly or implicitly)? (no = 0, yes = 1)
12. Which, if any, of these actors are evaluated positively? (Select one, fill in the number)
- 1. President of COP (Sameh Shoukry, also former president Alok Sharma)
 - 2. International institutions (EU, UN (this includes IPCC))
 - 3. Global politics (globally known politicians, excluding those from UK/Ireland)
 - 4. National politics (of UK and Ireland)
 - 5. Small Island Nations
 - 6. Other vulnerable countries (developing countries excluding small islands)
 - 7. BRIC (Brazil, Russia, India, China)
 - 8. Developed Countries
 - 9. Research (universities, think tanks, experts, research institutes)
 - 10. Civil society (NGOs, activists, campaigners)
 - 11. Business (businesses and business lobbying organisations)
 - 12. Indigenous people
 - 13. None of these
13. Are any of the actors evaluated negatively (explicitly or implicitly)? (no = 0, yes = 1)
14. Which, if any, of these actors are evaluated negatively? (Select one, fill in the number)
- 1. President of COP (Sameh Shoukry, also former president Alok Sharma)
 - 2. International institutions (EU, UN (this includes IPCC))
 - 3. Global politics (PM (also former) of Ireland or UK, globally known politicians)
 - 4. National politics (of UK and Ireland)
 - 5. Small Island Nations
 - 6. Other vulnerable countries (developing countries excluding small islands)
 - 7. BRIC (Brazil, Russia, India, China)
 - 8. Developed Countries
 - 9. Research (universities, think tanks, experts, research institutes)
 - 10. Civil society (NGOs, activists, campaigners)
 - 11. Business (businesses and business lobbying organisations)

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12. Indigenous people

13. None of these

Something counts as a viewpoint if ...

- someone expressing it has been quoted or paraphrased,
- or the article mentions it as common argument,
- or the article frames the story through that viewpoint.

Something does not count as a viewpoint if...

- the reference to it is very short, meaning that the reasons behind the position are not at all explored (e.g., "Many developed countries are hesitant to commit to the fund as they fear spiralling liabilities.")
- it is a definition of what loss & damage refers to (which would typically mention historical responsibility and/or unequal distribution of damages).

Note: Not all the below criteria have to be met for the category to apply. This is a guide rather than a checklist.

'Polluter Pays'

- Emphasises the historical responsibility of industrialised nations, (frames this as an issue of compensation/reparations).
- Bases responsibility on cumulative emissions.
- Calls on industrialised nations to show more accountability on commitment, or on other parties to put more pressure on industrialised nations in the negotiations.
- Criticises that vulnerable nations have to take the initiative.
- Advocates for an entirely new fund for loss & damage.
- Frames the outcome of COP27 as a historical success for vulnerable nations.
- *Example:* "Loss and damage is officially on the Cop27 agenda but wealthy countries have already stripped out language referring to 'liability' or 'compensation'," he added.

Private sector

- Stresses the historical responsibility of fossil fuel companies.
- Proposes a global tax on fossil fuels which should be used for the loss & damage fund.
- *Example:* Antigua and Barbuda PM Gaston Browne targeted fossil fuel companies that make \$3 billion a day in profits and demanded some of that money be used as reparations.

Consensus

- Emphasises that the priority should be that COP ends with a consensus.
- Calls on all parties for more willingness to compromise.
- Asks to use language that is not divisive (as in, not speaking of 'reparations')
- A pragmatic approach that does not divide parties into villains/victims.
- May argue that a consensus on loss & damage is needed to discuss other topics, such as the 1.5 degrees goal.
- *Example:* "This is no time for finger pointing. The blame game is a recipe for mutually assured destruction". "We must not allow the search for perfection stop us from doing what is possible and pragmatic".

Affordability

- Criticises/rejects the idea of a loss & damage fund, arguing that industrialised nations cannot afford it.
- May frame the demands of vulnerable countries as unrealistic/unaffordable.
- Emphasises that a loss & damage fund would be a burden on the taxpayers of industrialised nations and would have little public support.
- *Example:* Nothing is more likely to undermine public support for the green agenda than exposing taxpayers to extravagant claims for compensation.

Aid

- States that industrialised nations are on principle willing to support vulnerable nations but refuse to call this a reparation or compensation.
- Mentions that many industrialised nations are hesitant to support the fund as they fear 'spiralling liability', that more and more demands will be made.

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- Frames the financial assistance that nations are willing to make as aid.
- May propose that funding made available through existing aid budgets is already sufficient to cover loss & damage (this is different from the ‘mosaic approach’ as it is usually not accompanied by a detailed discussion of funding options).
- *Example:* “We are not talking about reparations or liability. We are talking about continuing to provide support for countries to adapt to the impacts of climate change”.

Eligibility

- Highlights that nations that were once regarded developing countries but have grown their economy substantially should not be a recipient of the loss & damage fund and/or contribute financially to the fund.
- Mentions that only the most vulnerable nations should be recipients of the fund.
- This is mostly about China, but other countries may also be mentioned, and their potential eligibility for the fund may be criticised on other grounds (e.g., portrayal of Pakistan as a nuclear power).
- May highlight that the fund should have a broad donor base and only support the most vulnerable countries.
- *Example:* “Obviously those countries with greater means across the board - and that includes some developing countries that have greater means - need to also step up and help in this transition.”

Self-interest

- Argues that it is in the industrialised nations best interest to provide financial assistance.
- Examples may include preventing migration of climate refugees, ensuring strategic competition and framing climate change as an issue of national security.
- *Example:* ‘It’s morally right but it’s also in our self-interest too. Because if we don’t act and we don’t help countries around the world, we’re going to end up with the problems that countries face - in terms of refugees, for example - coming back onto us.’

Denial of historical responsibility

- States that countries today are not responsible for what they did in the past.
- Denies any responsibility of industrialised nations to contribute to a loss & damage fund.
- Argues that industrialisation also had many positive effects on the world.
- *Example:* He added Britain’s ‘leadership of the industrial revolution brought prosperity to the world and led to increased life expectancy and better living conditions’.

Mosaic

- Argues that the financing for loss and damage should be based on existing instruments with funding from other sources added on top (this may be justified for the sake of time).
- Argues in favour of a ‘mosaic approach’ which combines funding from existing climate finance institutions, rich nations, multilateral development banks etc. Rich countries are willing to pay, but they say there should be a ‘broad donor base’.
- This appears in more detailed discussions over how a loss & damage fund can be realised. It can be interpreted both in favour of the fund, as it constructively discusses potential solutions, and against it, as its emphasis on a mosaic of sources can distract from individual countries’ responsibilities.
- *Example:* Instead, they wanted a “mosaic” approach that would involve funding from many different existing institutions, such as the World Bank and other development banks, existing climate funds such as the Green Climate Fund and Global Environment Facility, and national funds. “I know from experience it takes time to establish a fund, and more time to fill it,” said Timmermans. “Whereas we have existing instruments.”

Evaluation of an actor

A positive/negative evaluation may be characterised by highlighting the positive/negative consequences of an actor’s actions or by emphasising them as a valuable contributor or a hindrance to achieving progress in the negotiations (this refers to what the journalist wrote, not direct quotes from actors).

Example of a positive evaluation: As the **pathbreaking** *Bridgetown declaration*, **inspired** by the prime minister of

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Barbados, Mia Mottley, recommends, \$100bn of special drawing rights (the international money issued by the IMF) should immediately be redistributed from rich to poor countries, with half going to finance green projects. *Example of a negative evaluation:* Rishi Sunak has **dealt a blow** to the developing countries hardest hit by climate change by **shunning** appeals for the UK to contribute towards reparations for the natural disasters caused by hundreds of years of industrial pollution.

2.1.1 Elements of the Original Coding Frame and Instructions that were later dropped (Abridged from publishment)

2.2 Extended Moral Foundations Dictionary

The extended Moral Foundations Dictionary (eMFD) developed by Hopp *et al.* (2021) is based on a crowd-sourced approach. The authors trained over five-hundred non-experts to annotate texts deriving from a large body of US news articles. The annotators highlighted whether they deemed a word sequence to belong to a particular moral foundation. These annotations were used to calculate the foundation probabilities and moral sentiment scores for each word in the dictionary. The figure below taken from Hopp *et al.* (2021) shows the words with the highest probabilities for each foundation, with larger words indicating higher probabilities.



To use the eMFD, I followed a tutorial which can be accessed [here](#). I copied and pasted the relevant sections of the 234 articles in the corresponding rows in my 'input file' to ensure that the foundation probabilities would only reflect the moral language related to loss and damage (and not to any other topics discussed in the articles). Based on the tutorial, the Python code that I used to generate the foundation probabilities is as follows:

```
import pandas as pd
```

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```
import numpy as np
import seaborn as sns
from matplotlib import pyplot as plt

import os

print(os.getcwd())

input_file = pd.read_csv('article_input.csv', header=None)
output_file_path = 'single_probability_output.csv'

input_file.iloc[:, 0] = input_file.iloc[:, 0].astype(str).str.replace(r'\d+', '')

from emfdscore.scoring import score_docs

num_docs = len(input_file)

DICT_TYPE = 'emfd'
PROB_MAP = 'single'
SCORE_METHOD = 'bow'
OUT_METRICS = 'sentiment'
OUT_CSV_PATH = 'single-sent.csv'

df = score_docs(input_file, DICT_TYPE, PROB_MAP, SCORE_METHOD, OUT_METRICS, num_docs)
df.to_csv(output_file_path, index=False) # Pass the file path as the argument
```

Each word in the dictionary is assigned five probabilities indicating the likelihood that the word is related to each of the foundations, respectively. The 'single' option displayed in the code shows that the output is based exclusively on the words' highest probability. Hence, each word in the text that appears in the dictionary only indicates the foundation that it is most likely to be linked to, disregarding all other foundation probabilities. It was recommended to choose this option to discriminate more easily how strongly the foundations are represented in the texts. As a result of this approach, the foundation probabilities that I obtained are lower than

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if I had selected the option to display all probabilities (see the example outputs for the different options in the tutorial). It generally appears that the foundation probabilities generated by the eMFD are quite low. The values I obtained are in the range of the example output given in option 2 in the tutorial (which is the option I mostly used). Moreover, while the variation between the newspapers was low, it seems that the same was the case for the study conducted by Hopp *et al.* (2021:241).

Lastly, in addition to the foundation probabilities, the code above generates scores indicating the moral sentiment of the articles, as in whether an article leans more towards vice or virtue for each foundation. As this is indicated by negative and positive values, which I found hard to visualise and compare effectively for the eight newspapers, I disregarded the sentiment scores in the output and chose option 4 from the tutorial instead. This returned positive vice and virtue scores for each foundation, the sum of which are the foundation probabilities. While this provided additional insights into the moral sentiment of articles (for instance, of the care and authority foundations, as discussed in the discussion chapter), it provided ten scores which I deemed too much information to allow for effective comparisons between the newspapers. Hence, I chose to report the vice and virtue scores only in the appendix and limit my analysis mostly to the foundation probabilities.

Data Analysis (Abridged from publishment)

2.3.1 Internal Pluralism

2.3.2 External Pluralism

APPENDIX 3 – RESULTS (Abridged from publishment)

Appendix Table 1: Moral fundation probabilities

Appendix Figure 2: Virtue probabilities

Appendix Figure 3: Vice probabilities

Appendix Table 2: Viewpoint distribution in proportion to all viewpoint mentions

Appendix Table 3: Actor distributon in proportion to all actor mentions

Appendix Table 4: Moral fundations distribution in proportion to all moral fundations mentions

Appendix Table 5: Correlations between viewpoints and moral fundations

Appendix Table 6: Correlations between actors and moral fundations

Appendix Table 7: Proportional distribution of climate-related terms

Appendix Table 8: Correlations between viewpoints and climate-related terms