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Citizens assemble: a study on the impact of climate reporting in the Irish media 'before', 'during' and 'after' the *Citizens' Assembly* on 'how the state can make Ireland a leader in tackling climate change'

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ABSTRACT

The *Citizens' Assembly*, a form of deliberative mini-public, tasked 99 ordinary Irish citizens with the responsibility of deliberating on five topics, after which they made recommendations to government. Throughout assembly meetings members were presented with up-to-date accurate information from experts. 'How the State can make Ireland a leader in tackling climate change' was considered third by the assembly over two weekends. On the final day the citizens voted on thirteen strongly endorsed recommendations for government to act on. The release of the final report in April 2018 saw a further four ancillary recommendations added. There was considerable media coverage surrounding the *Citizens' Assembly* for this topic. This research undertakes a content analysis of four national media sources over fifteen-months; the *Farmers Journal*, the *Irish Independent*, *The Irish Times* and *TheJournal.ie*. We found that climate related reporting became more neutral in tone and more divergent in its relationship to evidence over the research period. There was a reflection of the key themes from the *Citizens' Assembly* in each media source, and themes changed through time for each publication. Two of the media sources examined increased their overall levels of climate reporting while the other two decreased.

KEYWORDS *Citizens' Assembly*; deliberative democracy; mini-publics; climate crisis; climate change; content analysis; media; adaptation

Introduction

Active participation is at the core of deliberative democracy and underpins the process of the *Citizens' Assembly* which operated in Ireland from 2016–2018. It was the second time Ireland engaged a deliberative process. In the run up to the 2011 election, there was a push for political reform, evident in many party manifestos (Farrell, O'Malley, & Suiter, 2013; Suiter & Farrell,

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2011). As a result, a pilot project, *We the Citizens*, a democratic participatory project underpinned by the principles of deliberative democracy, was established to assess the scope of political citizen engagement. In a deliberative system, public deliberation is conceptualised as a communicative activity that takes place (with varying degrees of quality) in multiple sites, such as parliaments, committees, board meetings, public gatherings, on the internet and in the media (Hendriks, 2016; Hendriks & Lees-Marshment, 2019). *We the Citizens* was so successful they put forward a recommendation to adopt deliberative democracy processes to 'complement and enhance' representative democracy (*We the Citizens*, 2011, p. 6). It was from this recommendation that the *Convention on the Constitution* and the *Citizens' Assembly* were derived. These processes have been successful in Ireland. In 2013 the *Constitutional Convention* voted (79%) in favour of marriage equality, the referendum in 2015 saw 62% of the population vote yes. In 2016–17 the *Citizens' Assembly* deliberated on the Eighth Amendment and 64% recommended to government that terminations without restriction be lawful. When this went to referendum, 67% voted to repeal the amendment. Suiter and Reidy (2019) found that voter choice is more accurately aligned with their preferences and beliefs within a deliberative democracy process, delivering more informed electorates, reflecting the observation that ordinary citizens make reasoned choices rooted in their underlying value preferences (Blais, Carty, & Fournier, 2008, p. 128). The resolution to establish the *Citizens' Assembly* was carried by Seanad Éireann in July 2016 (Buttimer, 2016), with the inaugural meeting taking place in October 2016 (*Citizens' Assembly*, 2016) and the climate change topic beginning in October 2017. Its success in Ireland is such that in June 2019 the government established another *Citizens' Assembly* tasked with bringing proposals to advance gender equality (*Citizens' Assembly*, 2020).

During the 2016–2018 *Citizens' Assembly* five topics were explored; the Eighth Amendment of the constitution, challenges and opportunities of an ageing population, fixed term parliaments, the manner in which referenda are held, and making Ireland a leader in tackling climate change. The assembly on climate change reached the highest levels of consensus of all five topics with citizens voting 80% or more in favour of recommendations (Devaney, Torney, Brereton, & Coleman, 2020). The media were provided a space, alongside observers and an expert advisory committee, from which to observe the proceedings. This presented reporters with a unique position to engage and report on the activities of the assembly and afforded an opportunity for conversation and engagement with the expert committee and invited expert speakers. Exposure to scientifically grounded data throughout the process provided the occasion to report with more confidence and clarity. But was this reflected in articles published? This research was conducted to examine the impact of the *Citizens' Assembly* on climate reporting through the lens

of four national media sources over a fifteen-month period, with a focus on the following questions:

- (1) Was there a shift in the discussion or framing of climate change in the media?
- (2) Were journalists reporting on climate change in a manner that engaged in material grounded in scientific evidence around the time of the assembly? and
- (3) Did it lead to a sustained change in subsequent reporting on the topic in the national media?

The paper is structured as follows: the next section provides some background to aspects of media theory that help shape social discourse. Next, a short section outlines deliberative mini-publics followed by a discussion on the expansion of deliberative research into mediated deliberation. This is followed by background information on the climate change *Citizens' Assembly*. The next section discusses the various methods employed in this study. The results section provides the key findings while the discussion reflects on these key findings. Finally, the conclusion provides context for the *Citizens' Assembly* on climate change and the role of media within current climate affairs.

Media

The media plays a pivotal role in society by providing salience to some narratives and not to others. In fact, Wessler (2008) describes mass media as the only communication mechanism that operates to provide permanent public deliberation. Carey (2009) defines news as 'drama', that invites our participation through the basis of assuming social roles within the news stories. Media influence lies with the discourse of power, through the choices they make in terms of who is interviewed, how stories are framed and therefore how they are perceived (Foucault, 1972; Karlberg, 2005; Maia, 2018; Schudson, 2003). They 'disperse and distribute power through discourses that we cannot help but internalise and accept as the "truth"' (Laughey, 2007, p. 75). The simple act of including or excluding a story, the position it is placed within a paper if included, the amount of words (space) provided, if it is accompanied by pictures or not, all tell the reader something about the importance of the story (Laughey, 2007; McCombs & Gilbert, 1986). This is a process known as agenda setting and can impact on the importance applied to topics by society (Newell, 2000; Robbins, 2017). 'The importance and power of the mass media and popular culture mean that they govern and shape all other forms of social relationships' (Strinati, 1995, p. 224). According to McCombs and Gilbert (1986), agenda setting involves four tenets, frequency of repetition, prominence within which news stories are placed (the position

within a paper), the degree of conflict, and the framing of the news item. This affords much power to journalists to shape how we view the world and how we interact with topics. As power has a transformative capacity, the role of the media in our everyday lives has the capability to help shape our opinions and therefore our actions, or inactions (Giddens, 1984). After all, 'media are not objective facilitators or neutral channels of organizational communication; they are expected to shape organizational behaviour in a specific way' (Hoof & Boell, 2019).

Deliberative mini-publics

Traditional mechanisms of democracy remove power from the public and place it with politicians, who are effectively professional elites (Cutler, Johnston, Carty, Blais, & Fournier, 2008; Ferejohn, 2008; Warren, 2008). *Citizens' Assemblies* on the other hand, are built on principles of inclusivity (Fishkin, 2009), and try to put power back into the hands of the electorate. The theory of deliberative democracy is concerned with the ability of the public sphere to engage in quality reasoning around politically based issues (Rinke, Knobloch, Gastil, & Carson, 2013). Mansbridge, Hartz-Karp, Amengual, and Gastil (2006) highlight the importance of diversity in exposing deliberative participants to a broader scope of opinions leading to improved decision making. Deliberative democracy in the form of mini-publics, and specifically *Citizens' Assemblies* encompass much of Habermas (1974, 1990) ideal speech situation and the underlying principles of discourse ethics which in effect provides power to the public via participatory deliberation and consequent resolution towards electoral recommendations. The Irish *Citizens' Assembly* follows the core design features of a deliberative mini-public (Farrell et al., 2019; Polletta & Gardner, 2018; Smith & Setälä, 2018). Namely:

- the 99 citizens were selected by a random process;
- the assembly involves the inclusion of an expert advisory panel who are not participants of the deliberative mini-public itself;
- it is led by an independent chair with a professional secretariat employed;
- the process allows for small-group deliberation and round table discussions facilitated by professional facilitators;
- and finally, the outputs included the production of recommendations and a report.

Mediated deliberation

The systemic turn in deliberative research broadens the scope of what it means to study deliberation with expanding research spaces, institutions,

actors and topics (Boswell, Hendriks, & Ercan, 2016; Ercan, Hendriks, & Boswell, 2017; Lück, Wessler, Maia, & Wozniak, 2018; Maia, 2018). In fact, Niemeyer and Jennstal (2018) cite media as one of the elements in a multi-pronged approach to building deliberative capacity. Research that deals with the role of the media in public processes like mini publics such as citizens' parliaments or assemblies, is a study of *mediated deliberation* (Rinke et al., 2013). It takes many forms. Maia (2018) examines hybrid media with literature on deliberation to advance how we understand networked public spheres. She also focuses on investigating the presence of deliberation within media-based communication, the 'information giving' of traditional media methods, and the discussion elements in new internet-based media forums. Wessler (2008) uses the examination of narrative frames, different style of 'utterances', and dialogic structure to assess the presence of deliberation within media communication. Rinke et al. (2013) examined print media coverage of the Australian Citizens' Parliament, focusing on the volume of articles alongside tone and perspectives.

Journalists play a particular role in mediated deliberation and their input in terms of experience, exposure to issues and experts, along with their social and professional networks, influence the 'gatekeeping' process of information sharing through the articles they choose to write (Lück et al., 2018; Rinke et al., 2013). They hold the power of deliberation in terms of their ability to analyse arguments and juxtapose differing perspectives (Wessler, 2008). Lück et al. (2018) investigate journalist-source relationships in a transnational setting, that of the Conference of Parties (COP meetings), and find that journalists who focus on commentary pieces have more variegated and informal networks than those that focus on event reporting, and therefore serve to engage the deliberative process with a more diverse audience. Lück et al. (2018) have a unique research position as the COP meetings can be viewed as continued deliberation with strong media attention, one in which PR actors and journalists can be found to co-produce information.

All this research has a commonality, the examination of the presence of deliberation within media outputs. The difference with the present study is that it seeks to examine the influential role deliberation may have on the specific coverage following the deliberative mini-public, that is, the influence upon climate reporting.

Citizens' Assembly on climate change

The *Citizens' Assembly* met over two weekends to discuss issues around climate change. It was a closed process. Only participating citizens, the organising committee and staff, the expert advisory panel, the media, and some interested observers (through application which required affiliation with an organisation or university) were present. Both authors of this paper were

present, as observer (lead author) and on the expert advisory panel. The public could access the open portion of proceedings through the live feed on the *Citizens' Assembly's* website, later uploaded to the assembly's YouTube channel; or through daily reporting by the media. The latter is the most important for communicating the process as it is how the outcomes are disseminated to the broader public, as 'systems of dominant meaning are imposed through the media' (Williams, 2003, p. 159). Media coverage doubled from 29 articles on the first weekend to 64 for the second weekend of deliberation. This coverage includes print, tv and radio news reports. It was a topic that generated much interest.

Deliberations were held across a mix of public and private sessions with media and observers precluded from the latter. The assembly heard from a broad range of experts on climate change science, current practices and potential future policy, and climate friendly practices. Expert speakers included professors and doctors of climate science and meteorology, authorities on smart agriculture and food resilience, professionals involved in policy making, innovators in energy development, among others. The *Citizens' Assembly* made thirteen recommendations to government, which came about through a ballot voting process. There were revisions made to the ballot paper throughout the two weekends, and the ballot was finalised only when the members agreed. This was appended to with a further four recommendations with the release of the final report in April 2018. The full list of recommendations is available online (bit.ly/3atbipS). These recommendations are practical and provide a clear pathway for Ireland to become a leader in tackling climate change.

The time spent by members of the media in attendance will have exposed journalists, along with the 99 citizens, to the expert information disseminated across the weekends. This provided an opportunity for climate reporting to be grounded in scientific evidence, and for the journalists to engage with experts in the field, either via the expert advisory panel or through the invited experts who presented to the assembly. Not all journalists remained for all information sessions and there was no register of attendance, although the media section was well attended throughout the process.

Methodologies

Four national media print sources were selected to examine the period surrounding the *Citizens' Assembly* on climate change, including six months before and after the assembly. The media sources chosen to ascertain the 'social weather' of Ireland were the *Irish Farmers Journal*, hereafter referred to as the *Farmers Journal*, the *Irish Independent*, *The Irish Times* and the *Journal.ie*, hereafter referred to as the *Journal*. *The Irish Times* was first published in 1859; the *Irish Independent* absorbed the *Freeman's Journal* when it was

established in 1924 (Larkin, 2012). Both these longstanding publications have had an important and integral position in Irish life, adapting to meet and reflect the needs of an evolving Ireland. The *Farmers Journal*, established in 1948, was chosen to represent the agricultural sector, which will be significantly impacted by climate change and yet are often targeted as villains of the climate change story. This publication represents the potential dissenting voice in the climate change debate. The *Journal*, established in 2010, was chosen as it is the only news source in Ireland that has signed up to the International Fact-Checking Network Code of Principles (Poynter, 2018), and as an online only media source is representative of the changing face of news reporting, with a focus on 'citizen journalism' through encouraging comments (Fallon, 2010). Three of these publications had a dedicated environmental correspondent during this research period. Thomas Hubert for the *Farmers Journal*, who has since moved on; Paul Melia for the *Irish Independent*; and Kevin O' Sullivan for *The Irish Times*. The *Journal* did not respond to requests for information regarding a dedicated journalist to environmental reporting.

An analysis was undertaken for a period 'before' (March–August 2017), 'during' (September–November 2017) and 'after' (December 2017–May 2018) the *Citizens' Assembly*. The calibration period highlighted time restrictions and resulted in an analysis of a subset of articles each month for the 'before' and 'after' periods. Calibration consisted of coding material from one media source for the period October 2016–March 2017, which allowed the lead author adequate time to become familiar with the procedure, tweak the coding system as necessary and assess the average time required for coding, without unfairly impacting on the material for analysis. It was during this calibration period that the unrealistic timeline was realised, resulting in trimming the project to a subset of one week per month for the 'before' and 'after' periods, whereby the third week of every month was chosen arbitrarily. The full selection of climate related articles for the period 'during' the *Citizens' Assembly* was analysed, totalling a subset of 747 articles from March 2017–May 2018.

Content analysis

Content analysis is a method of classifying or categorising communication (Short & Palmer, 2008; Weber, 1990). This approach was applied to articles from the four media sources and were coded using the *MAXQDA* software package, which allows for quantitative and qualitative mixed methods analysis (MAXQDA, 2019). A coding system was established and saved in *MAXQDA* format split into: context codes, tone and reliance on evidence (see Appendix). Articles were sourced from any section of the newspapers (news, features, analysis, etc.) the only specification allocated was the search term 'climate change'. Tone was split into negative, positive and neutral; and only one

could be allocated per article. In articles where both positive and negative text was present, the article was assessed as neutral tone. Reliance on evidence consisted of a 5-point Likert rating scale for connecting climate content with reliance on evidence: none, low, medium, high and very high. Only one category of reliance on evidence could be allocated per article, in cases where more than one was applicable the highest level was assigned. Articles that were coded with 'none' indicated no connection to climate change and were therefore excluded from subsequent analysis, which reduced the sample to from 747 to 594. Context codes¹ indicate the subject matter or theme of an article, of which there were 12 assigned. There was no limit to the number of context codes that could be allocated to each article which enabled nuances in reporting to be retained. All coded data underwent subsequent statistical analysis.

Changes in tone or reliance on evidence constituted key indicators for assessing any potential shift in the discourse surrounding climate change. To explore the content in more detail, context codes were allocated to sections of text highlighting themes running through the articles. The process of analysis is inherently a human based activity and therefore open to subjectivity. To alleviate the potential for personal bias, the lead author engaged three independent secondary assessors to code a subset of 78 articles randomly chosen and split proportionally between media sources. The first independent assessor was asked to look at tone of language through examining individual words. This proved somewhat problematic, whereby the independent assessor was unable to code 45% of this subset and so this process was adjusted. The second and third independent assessors were asked to code the article according to the overall tone of the piece. Tone was coded and examined in such a way that a difference of 1 is equal to a difference from positive or negative to neutral, or vice versa; while a difference of 2 is equal to one independent assessor coding an article positive or negative when the lead author has coded the opposite. Reliance on evidence was assessed in the same manner but with four codes (low, medium, high and very high), this analysis could result in a difference of 3 between coders, allowing a greater scope for discrepancy. Furthermore, all articles were subject to sentiment analysis using the open source *R* package, *RSentiment* (Bose, 2017). Sentiment analysis studies opinions and attitudes from written language and can therefore act as another method of assessing tone (Liu, 2012). This analysis was assessed against that of the researcher and the secondary assessors for allocation of tone and reliance on evidence.

Representativity

Schäfer et al. (2016) recommend normalising article figures to gain insight into how dedicated a media source is to a subject. This process was undertaken to assess the percentage of articles dedicated to climate change for both the *Irish*

Independent and *The Irish Times* during the research period, as these were readily available through ProQuest and the *Farmers Journal* and the *Journal* were not. ProQuest allows a user to search for all articles for specified time ranges while leaving the search terms blank enabling the researcher to ascertain an accurate number of articles printed by each of these media sources across all possible themes. The search was then repeated using the search term 'climate change' to calculate the percentage of relevant articles.

Statistical analysis

Exploratory analysis was conducted through the *R* programming language which was used to test for statistical significance by running the chi square test of independence to assesses the probability of independence. *R* was also used to calculate standardised residuals, from which the lead author explored the relationship between variables. Analysis was conducted for each paper during each period and overall. The data that support the findings of this study are openly available at [10.5281/zenodo.3632380](https://zenodo.org/record/3632380). Only statistically significant results are reported in the statistical analysis category of the results section.

Results

Frequency

To examine the power of agenda setting for each media source, the frequency of climate articles is examined alongside the scope to which each publication employed their dedicated environmental correspondents. There are 109 articles for the *Farmers Journal*, 188 for the *Irish Independent*, 221 for *The Irish Times*, and 76 for the *Journal*.

The Irish Times reported more on climate than the other media, except in the period 'after' when the *Irish Independent* had the highest number of climate related articles. All articles in the period 'during' were analysed, compared with a subset in 'before' and 'after'. Therefore, to assess for changes through time, we looked at differences between the periods 'before' and 'after'. Both the *Farmers Journal* and the *Irish Independent* increased their climate reporting from 'before' to 'after' while both *The Irish Times* and the *Journal* decreased their climate related articles. These were small changes for the *Farmers Journal* and the *Journal* (+5.5% and -2.6% respectively), while for *The Irish Times* and the *Irish Independent* this was a larger change (-8.2% and +8.5% respectively).

In terms of dedicated environmental correspondents reporting, Thomas Hubert wrote 17.4% ($n = 19$) of articles for the *Farmers Journal*, Kevin O'Sullivan wrote 15.8% ($n = 35$) for *The Irish Times*, while Paul Melia wrote 17.5% ($n = 33$) of the climate related articles for the *Irish Independent*.

Representativity

Robbins (2017) conducted an analysis of climate related articles over a ten-year period using multiple sources in an Irish context and found a decrease from 1.76% in 2007–0.85% in 2016. The dip in Robbins analysis corresponds with the economic downturn when climate related issues were ‘crowded out’ (Culloty et al., 2019; Djerf-Pierre, 2012). Schmidt, Ivanova, and Schäfer (2013) analysed 37 publications from 1997 to 2009 and found the average coverage of climate change articles was 0.62% of total articles. Ireland was included in the Schmidt et al. (2013) study, although only *The Irish Times* was analysed averaging 0.84% coverage with 6151 articles. This body of work analyses articles over a smaller timescale with an average of 0.73% for the *Irish Independent* and 1.03% for *The Irish Times*, both higher than Schmidt et al. (2013) and *The Irish Times* greater than Robbins (2017). The highest percentage of articles dedicated to climate change was in July (17th–23rd) 2017 for *The Irish Times* and October (16th–22nd) 2017 for the *Irish Independent*. 19th July 2017 saw the release of the publication of the *Statutory National Mitigation Plan* (DCCAE, 2019), while October 16th–23rd 2017 was midway between the two weekends the *Citizens’ Assembly* was dedicated to climate change and coincided with the landfall of ex-Hurricane Ophelia in County Cork.

Personal bias

Turning next to the potential issue of personal biases of the lead author in assigning tone and reliance on evidence to articles, three independent secondary assessors coded a subset of 78 articles. Independent assessors 2 and 3 present no difference to the researcher in over 55% of all articles, with a further 28–37% showing only a difference of 1, when coding for tone. Reliance on evidence was examined in the same manner. Again, there is a greater level of comparability with the second and third independent assessors who agree with the researcher in 41–44% of cases and only deviate by a difference of 1 in a further 38–49% of articles. Based upon the evidence from independent assessors, the majority of articles are either consistently assessed for tone and reliance on evidence or differ by at most one category, lending to a degree of confidence to the assessment performed by the lead author of a much larger population of articles.

Tone

Tone is an important factor in promoting or inhibiting action. The tone of an article is inherently linked to how the narrative is framed. Overall, there was an increase in neutral (+8%) tone from ‘before’ the *Citizens’ Assembly* to ‘after’ it and decreases in negative and positive articles, each by 4%.

Figure 1 provides an overview of the change in tone for each of the publications after the *Citizens' Assembly*. This is calculated as the difference in tone from 'before' the assembly to 'after'. The *Farmers Journal* increased neutral articles by 11%, while it decreased positive toned articles by 6%. The *Irish Independent* increased all climate reporting after the *Citizens' Assembly*, showing increases of 1% for negative, 7% for positive, and 3% for neutral. *The Irish Times* decreased all climate reporting following the assembly with decreases of 3% for both positive and negative, and 5% for neutrally toned articles. *The Journal* shows a decrease in negative and positive articles by 2% and 6% respectively, while they have an increase in neutral toned articles by 2% following the *Citizens' Assembly*.

Statistical analysis – pooled results (all publications across entire research period)

Overall, there are three statistically significant results for tone of language across the research period. The *Farmers Journal* report fewer negatively toned articles and more neutrally toned articles than expected. The *Irish Independent* publish fewer articles with a neutral tone than expected.

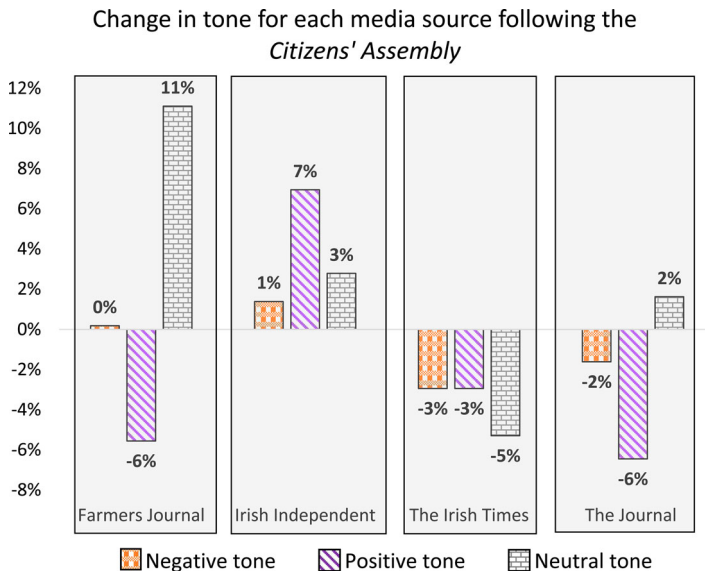


Figure 1. Change in tone for each media source following the *Citizens' Assembly*, calculated as the difference between the period 'before' and the period 'after' the assembly. Results above zero are an increase in articles with the allocated tone, while those below zero indicate a decrease. All results are presented as a percentage of total articles analysed for each media source.

Statistical analysis – individual results (all publications through each research period)

In the period ‘before’ the assembly there are significant results for both the *Irish Independent* and the *Journal*. The *Irish Independent* published more negative and fewer neutral and positively toned articles than expected, while the *Journal* published more positively toned articles than expected. ‘During’ the assembly the *Farmers Journal* produced more neutrally toned articles, while the *Journal* produced fewer neutrally toned articles than expected. The period ‘after’ the assembly saw the *Farmers Journal* increase neutral and decrease positively toned articles, while the *Irish Independent* published fewer neutral articles than expected.

Reliance on evidence

Reliance on evidence measures, by means of a Likert Scale, the use or reliance each publication has on scientific evidence when reporting on climate. This variable does not exhibit much variation from one period to another (Figure 2). Each level ranges from 25–35% on the scale, except ‘very high²’, which ranges from 6–10%. This means that journalists only referenced evidence for 6–10% of articles while reporting on climate change. 25–33% represents an allocation of ‘high³’ and occurs when journalists discuss climate change in a relevant and connected manner without referencing specific research. These two highest levels on the scale account for ~37% of all articles over the entire research period.

Statistical analysis – pooled results (all publications across entire research period)

The statistical analysis provided three statistically significant results for the pooled analysis. The first is that the *Farmers Journal* published more articles than expected deemed ‘medium’ on the reliance on evidence scale. *The Irish Times* published fewer, while the *Journal* published more articles than expected that engaged with experts (‘very high’).

Statistical analysis – individual results (all publications through each research period)

The period ‘before’ the *Citizens’ Assembly* shows no statistically significant results. There are six significant results for ‘during’, three positives (performed better than expected) and three negatives (performed worse than expected). The *Irish Independent* had fewer ‘high’ coded articles and more ‘medium’ coded articles than expected. *The Irish Times* had fewer climate related articles linked with ‘medium⁴’ and ‘very high’, and more ‘high’ articles than expected. While the *Journal* had more ‘very high’ coded articles than expected. The

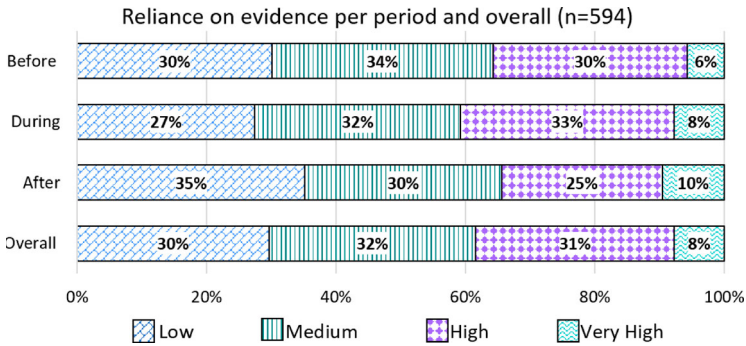


Figure 2. Reliance on evidence as coded by researcher across all articles ($n = 594$) for each period alongside the total overall, March 2017–May 2018. Coded from low through to very high. This scale reflects the level of climate related content within the article and the level of engagement with experts and / or research papers. Full descriptions of the codes are presented in the appendix.

period ‘after’ highlights only one statistically significant result, that is *The Irish Times* published fewer articles coded ‘high’ than expected.

Context codes

The context codes are a list of key words representing themes.⁵ They act as an indicator of how media sources frame narratives. This study looked at the change of codes from ‘before’ to ‘after’ the assembly to ascertain any changes in themed climate reporting. There was an expectation to see a rise in certain codes ‘after’ the *Citizens’ Assembly* than ‘before’, and in some cases ‘during’ the assembly. For example, the researchers expected to see an increase in the volume of articles dealing with energy, transport and agriculture ‘during’ the *Citizens’ Assembly* as there was a specific request for public and group submissions dealing with these themes. The results showed that ‘agriculture’ and ‘energy’ both increased while ‘transport’ decreased from ‘before’ to ‘during’ the *Citizens’ Assembly*. There was also an expectation to see a rise in articles coded with ‘action’ or ‘funding’. This expectation was in part to do with the success of the previous *Citizens’ Assembly* on the ‘Constitution on the Eight Amendment’, with action taken in the form of a referendum following the citizens’ recommendations. Action is a key context code in that it is traceable to action plans for mitigation and adaptation, and although it increased from ‘before’ to ‘during’ the assembly, overall there was a reduction in the period ‘after’, when it might be expected to see more plans for actionable change arising from the *Citizens’ Assembly’s* recommendations. ‘Funding’ increased in the period ‘during’ from one article (the *Journal*) to seventeen (14 for *The Irish Times* and 3 for the *Journal*). This reduced to a total of four ‘funding’ themed articles ‘after’ the assembly, two

for each of these publications. There was a focus on providing recommendations to government with the overarching aim of policy implementation, and although 'policy' saw a reduction in reporting 'during' the assembly, there was no change when looking at the differences from 'before' to 'after'. 'Agriculture' was the most common theme for the *Farmers Journal* 'before' the assembly, changing to 'policy' 'after'. The *Irish Independent* published more 'energy' themed articles 'before' and 'agricultural' themes 'after' the assembly. The *Irish Times* had more 'policy' related themes 'before' and 'other' themed articles 'after'. The *Journal* had more 'communication' themed articles 'before' and 'other'⁶ 'after'.

Discussion

This study found that of the four publications, *The Irish Times* had the highest frequency of climate reporting (1.03%) higher too than the European average (0.62%) when assessed against overall reporting (all topics). When considering this 1.03% as the full scope of climate related reporting (presented as 100% from here), throughout the research period the publication reduced its climate related reporting from 'before' (23%) to 'after' (15%). The scope of this study cannot lend to commentary on this trend, it may be the result of slight editorial changes to the publication overall, or it could indicate a change in how *The Irish Times* reports on climate. A longer study is required to test this. The *Journal* also decreased its climate reporting from 26% to 24% over the same timeframe, while the *Farmers Journal* and the *Irish Independent* increased theirs from 20% to 26%, and 16% to 24% respectively. This research period was well represented for climate reporting when comparing with previous studies. Lück et al. (2018) discuss the importance of considering organisational factors such as the professional specialisation of an actor. Yet of the articles assessed in this study, no more than 17.5% were written by dedicated environmental correspondents. This means that over 80% of climate articles are written by journalists that are not specialised in climate reporting. Future studies could examine the reasons for this and ask if reporting on climate is becoming more accessible to all journalists, or if there is simply not enough merit put on climate reporting to ensure that specialised professionals are tasked with this role.

The *Farmers Journal* was selected as the potential voice of contention. Agriculture is responsible for just under 30% of Ireland's greenhouse gas emissions, the highest for any sector (EPA, 2011). It was expected that opposition to climate change would arise here, if anywhere. The *Farmers Journal* report on climate with a 'settled science' frame in over 77% of their articles (O'Neill, Williams, Kurz, Wiersma, & Boykoff, 2015). Yet as a publication they rarely seek out the opinion of climate experts. Professor Alan Matthews told the *Citizens' Assembly* that farmers would receive CAP (Common

Agriculture Policy) payments even if they stopped rearing cattle (Matthews, 2017). This was one of the single biggest issues raised when agriculture was discussed in this and other publications in the period 'during' the assembly. Many of the articles printed following the assembly were of the frame of mind that agriculture was an easy target because of this, although overall the *Farmers Journal* reduced the level of articles with agriculture as a theme by 37%. Although the articles actively disagreed with many of the comments made at the assembly, and with some of the recommendations made to government, this did not affect the tone of the articles negatively. In fact, they increased their neutral articles and decreased their positive, with the biggest change in neutral of 11%, and there was an overall increase in climate related publishing from the *Farmers Journal* from 'before' to 'after' the *Citizens' Assembly*.

The *Irish Independent* was unique in that it not only increased all climate reporting, but as a publication, it actively sought the input from experts with an increase of this in 21% of articles. The publication also saw an increase of 7% in positively toned articles. It is unclear if these changes are linked, the sample size when portioned for publication, period and positive tone, became too small ($n = 11$) to ascertain any statistically significant results. A study with a larger sample size might examine this.

The aim of this project was to answer the questions:

- (1) Was there a shift in the discussion or framing of climate change in the media?
- (2) Were journalists reporting on climate change in a manner that engaged in material grounded in scientific evidence around the time of the assembly?
and
- (3) Did it lead to a sustained change in subsequent reporting on the topic in the national media?

To assess the framing of climate change in the Irish media we have examined the tone and context codes present in each article. Overall, neutrally toned articles increased while both positively and negatively toned articles decreased from 'before' to 'after' the *Citizens' Assembly*. The movement in percentage change in context codes from 'before' to 'after' show that some of the themes in narratives presented by the publications were indeed influenced by the *Citizens' Assembly*. In terms of reporting grounded in evidence around the time of the assembly, only two publications increased their climate reporting, grounded in the highest levels of evidence. These were the *Irish Independent* and the *Journal*. Overall, we can surmise that generally climate related reporting became more neutral in tone and more divergent in its relationship to evidence over the research period, with variations to themes across the period.

There is evidence of sustained change in subsequent reporting on climate change in the national media. Both *The Irish Times* and the *Journal* have decreased their levels of climate change articles, while both the *Farmers Journal* and the *Irish Independent* have increased climate related reporting.

Conclusion

The new programme for government report (2020), *Our Shared Future*, commits to proposals that reflect recommendations made by the *Citizens' Assembly*, such as the allocation of carbon tax revenue into a Climate Action Fund; the retrofitting of over 500,000 homes by 2030; the incentivisation of microgeneration; and government expenditure on public transport infrastructure at a ratio of 2:1 in favour of public transport over private. The government has pledged to maintain this expenditure structure for each year, and each budget for the lifetime of the current government. This report reflects the strength of the deliberative process and outlines 'how the State can make Ireland a leader in tackling climate change'. It may have been bolstered by the cross-party consensus achieved for the 2019 Oireachtas Joint Committee on Climate Action (2019) cross-party report '*Climate Change: A Cross-Party Consensus for Action*'. The report cites the obvious desire from citizens involved in the *Citizens' Assembly* for the state to take a leadership role and it took the assembly's recommendations as a starting point (Joint Committee on Climate Action, 2019). The report has also made recommendations for the Broadcasting Authority of Ireland to develop guidelines for reporting climate change (Torney, 2019). Implementation of this recommendation could see vast improvements in the field of climate reporting. The government view the media as key in communicating plans to incentivise behavioural change as part of a programme for climate mitigation and adaptation, 'these mediums and platforms are instrumental in communicating the messages of climate change, climate action and climate justice and, in the engagement of citizens in both the discourse, and the process of implementing change' (Joint Committee on Climate Action, 2019).

The evidence of *Citizens' Assemblies* thus far, is reflective of the 'social weather' in Ireland and is therefore an area that journalists can use as a trustworthy background. Climate reporting in Ireland, as in many other countries, has a long way to go to emulate the scale of the issue facing humanity, but this small study shows that some of our national publications are heading in a direction more reflective of reality.

Notes

1. A full list of context codes, or action codes, are provided with short description is available in the Appendix.

2. The term 'climate' or 'climate change' is used in the text in the context of anthropogenic climate change and directly refers to evidence in research journals or projects or refers to reports by reputable bodies (e.g. EPA). Allocation of this term grounds the material in scientific evidence.
3. The term 'climate' or 'climate change' is used in the text in the context of anthropogenic climate change. May discuss specific associated issues. May refer to evidence without referencing specific papers or research. May speak to an expert (head of reputable environmental organisation/Dr./Prof. in climate related areas), or involve politicians making change/discussing change.
4. The term 'climate' or 'climate change' is used in the text while connecting it to/attributing cause to human induced change.
5. A full list of context codes, or action codes, are provided with short description is available in the Appendix.
6. Falls into another category, not already incorporated into the context code list.

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References

- Blais, A., Carty, R. K., & Fournier, P. (2008). Do citizens' assemblies make reasoned choices? In M. E. Warren & H. Pearse (Eds.), *Designing Deliberative Democracy* (pp. 127–144). Cambridge: Cambridge University Press.
- Bose, S. (2017). Package 'RSentiment' [PDF online]. Retrieved from <https://cran.rproject.org/web/packages/RSentiment/RSentiment.pdf>
- Boswell, J., Hendriks, C. M., & Ercan, S. A. (2016). Message received? Examining transmission in deliberative systems. *Critical Policy Studies*, 10, 263–283.
- Buttimer, J. (2016). *Citizens' Assembly: Motion*. Retrieved from <https://www.oireachtas.ie/en/debates/debate/seanad/2016-07-15/3/>
- Carey, J. W. (2009). *A Cultural Approach to Communication. Communication as Culture*. New York, NY: Routledge.
- Citizens' Assembly. (2016). *Welcome to the Citizens' Assembly*. Retrieved from <https://www.citizensassembly.ie/en/Home/>
- Citizens' Assembly. (2020). *Dr Catherine Day appointed as the chair of the new Citizens' Assembly*. Retrieved from: <https://www.citizensassembly.ie/en/news-publications/press-releases/dr-catherine-day-appointed-as-the-chair-of-the-new-citizens-assembly.html>
- Culloty, E., Smeaton, A., Suiter, J., Murphy, P., Brereton, P., Zhang, D., & Robbins, D. (2019). *Climate change in Irish media* (EPA Research Report (2014-CCRP-DS.8) No. 300), EPA Research Programme 2014-2020. Johnstown Castle, Co. Wexford, Ireland: Environmental Protection Agency.
- Cutler, F., Johnston, R., Carty, K., Blais, A., & Fournier, P. (2008). Deliberation, information and trust: The British Columbia Citizens' Assembly as agenda setter. In M. E. Warren & H. Pearse (Eds.), *Designing Deliberative Democracy* (pp. 166–191). Cambridge: Cambridge University Press.
- DCCAE. (2019). *Minister Bruton holds summit on all of government climate plan to make Ireland a leader on climate*. Retrieved from <https://dcaae.gov.ie/en-ie/news-and-media/press-releases/Pages/Minister-Bruton-Holds-Summit-on-All-of-Government-Climate-Plan-to-make-Ireland-Leader-on-Climate.aspx>
- Devaney, L., Torney, D., Brereton, P., & Coleman, M. (2020). Ireland's Citizens' Assembly on climate change: Lessons for deliberative public engagement and communication. *Environmental Communication*, 14, 141–146.
- Djerf-Pierre, M. (2012). The crowding-out effect: Issue dynamics and attention to environmental issues in television news reporting over 30 years. *Journalism Studies*, 13(4), 499–516.
- EPA. (2011). *What are Ireland's greenhouse gas emissions?* Retrieved from <http://www.epa.ie/climate/communicatingclimatescience/whatisclimatechange/whatareirelandsgreenhousegasemissionslike/>
- Ercan, S. A., Hendriks, C. M., & Boswell, J. (2017). Studying public deliberation after the systemic turn: The crucial role for interpretive research. *Policy & Politics*, 45, 195–212.
- Fallon, B. (2010). In: O'Connell, S. (2010, September 2) Copycat news site to feed in chat and reaction. *The Irish Times*. Retrieved from <https://www.irishtimes.com/business/copycat-news-site-set-to-feed-in-chat-and-reaction-1.645687>
- Farrell, D., Curato, N., Dryzek, J. S., Geißel, B., Grönlund, K., Marien, S., ... Setälä, M. (2019). *Deliberative Mini-Publics: Core Design Features*. Centre for Deliberative Democracy and Global Governance (working paper 2019/5). Canberra, Australia: Centre for Deliberative Democracy and Global Governance.

- Farrell, D. M., O'Malley, E., & Suiter, J. (2013). Deliberative democracy in action Irish-style: The 2011 *We the Citizens* pilot Citizens' Assembly. *Irish Political Studies*, 28(1), 99–113.
- Ferejohn, J. (2008). The Citizens' Assembly Model. In M. E. Warren, & H. Pearse (Eds.), *Designing deliberative democracy*. Cambridge, UK: Cambridge University Press.
- Fishkin, J. S. (2009). *When people speak: Deliberative democracy and public consultation*. Oxford, UK: Oxford University Press.
- Foucault, M. (1972). *The archaeology of knowledge*. London, UK: Tavistock.
- Giddens, A. (1984). *The constitution of society: Outline of the theory of structuration*. Cambridge, UK: Polity Press.
- Habermas, J. (1974). *Theory & practice*. London, UK: Heinemann.
- Habermas, J. (1990). *Moral Consciousness and Communicative Action, Studies in Contemporary German Social Thought*. Cambridge, MA: MIT Press.
- Hendriks, C. (2016). Coupling citizens and elites in deliberative systems: The role of institutional design. *European Journal of Political Research*, 55, 43–60. doi:10.1111/1475-6765.12123
- Hendriks, C., & Lees-Marshment, J. (2019). Political Leaders and public engagement: The hidden world of informal Elite-citizen Interaction. *Political Studies*, 67(3), 597–617. doi:10.1177/0032321718791370
- Hoof, F., & Boell, S. K. (2019). Culture, technology, and process in 'media theories': Toward a shift in the understanding of media in organizational research. *Organization*, 26, 636–654. doi:10.1177/1350508419855702
- Joint Committee on Climate Action. (2019, March). *Climate change: A cross-party consensus for action*. Retrieved from https://data.oireachtas.ie/ie/oireachtas/committee/dail/32/joint_committee_on_climate_action/reports/2019/2019-03-28_report-climate-change-a-cross-party-consensus-for-action_en.pdf
- Karlberg, M. (2005). The power of discourse and the discourse of power: Pursuing peace through discourse intervention. *International Journal of Peace Studies*, 10, 1–22.
- Larkin, F. (2012). *The freemans journal*. Retrieved from <https://blog.nli.ie/index.php/2012/08/21/thefreemansjournal/>
- Laughey, D. (2007). *Key Themes in Media Theory*. Berkshire, UK: Open University Press, McGraw-Hill.
- Liu, B. (2012). *Sentiment Analysis and Opinion Mining, Synthesis Lectures on Human Language Technologies*. San Rafael, CA: Morgan & Claypool.
- Lück, J., Wessler, H., Maia, R., & Wozniak, A. (2018). Journalist–source relations and the deliberative system: A network performance approach to investigating journalism's contribution to facilitating public deliberation in a globalized world. *International Communication Gazette*, 80, 509–531.
- Maia, R. (2018). Deliberative media. In A. Bächtiger, J. S. Dryzek, J. Mansbridge, & M. Warren (Eds.), *The oxford handbook of deliberative democracy* (pp. 347–364). Oxford, UK: Oxford University Press.
- Mansbridge, J., Hartz-Karp, J., Amengual, M., & Gastil, J. (2006). Norms of deliberation: An inductive study. *Journal of Deliberative Democracy*, 2(1), 7.
- Matthews, A. (2017). *If Ireland was a leader in tackling climate change what would agriculture/land use policy look like in Ireland?* Retrieved from <https://www.citizenassembly.ie/en/Meetings/Alan-Matthews-Paper.pdf>
- MAXQDA. (2019). *What is MAXQDA?* Retrieved from: <https://www.maxqda.com/what-is-maxqda>
- McCombs, M., & Gilbert, S. (1986). News influence on our pictures of the world. In J. Bryant & D. Zillman (Eds.), *Perspectives on media effects* (pp. 1–16). New Jersey, NJ: Lawrence Erlbaum Associates.

- Newell, P. (2000). *Climate for Change: non-State Actors and the Global Politics of Greenhouse*. Cambridge, UK: Cambridge University Press.
- Niemeyer, S., & Jennstal, J. (2018). Scaling up deliberative effects—applying Lessons of mini-publics. In A. Bächtiger, J. S. Dryzek, J. Mansbridge, & M. Warren (Eds.), *The Oxford Handbook of Deliberative Democracy* (pp. 328–347). Oxford, UK: Oxford University Press.
- O'Neill, S., Williams, H. T. P., Kurz, T., Wiersma, B., & Boykoff, M. (2015). Dominant frames in legacy and social media coverage of the IPCC Fifth assessment report. *Nature Climate Change*, 5, 380–385. doi:10.1038/NCLIMATE2535
- Polletta, F., & Gardner, B. (2018). The forms of deliberative communication. In A. Bächtiger, J. S. Dryzek, J. Mansbridge, & M. Warren (Eds.), *The Oxford Handbook of Deliberative Democracy* (pp. 69–85). Oxford, UK: Oxford University Press.
- Poynter (2018). *International fact-checking network fact-checkers' code of principles*. Retrieved from <https://www.poynter.org/international-fact-checking-network-fact-checkers-code-principles>
- Programme for Government. (2020). *Our shared future* (Government Report). Ireland.
- Rinke, E. M., Knobloch, K. R., Gastil, J., & Carson, L. (2013). Mediated Meta-deliberation: Making sense of the Australian Citizens' parliament. In L. Carson, J. Gastil, J. Hartz-Karp, & R. Lubensky (Eds.), *The Australian Citizens' Parliament and the Future of Deliberative Democracy* (pp. 260–273). University Park, PA: Pennsylvania State University Press.
- Robbins, D. (2017). *Game of frames: The competition to establish the dominant framing of climate change among journalists, ministers and political advisors* (Doctoral thesis). Dublin: Dublin City University.
- Schäfer, M., Berglez, P., Wessler, H., Eide, E., Nerlich, B., & O'Neill, S. (2016). *Investigating mediated climate change communication: A best-practice guide* (Research Report No 6.) Jönköping, Sweden: School of Education and Communication, Jönköping University.
- Schmidt, A., Ivanova, A., & Schäfer, M. (2013). Media attention for climate change around the world: A comparative analysis of newspaper coverage in 27 countries. *Global Environmental Change*, 23, 1233–1248. doi:10.1016/j.gloenvcha.2013.07.020
- Schudson, M. (2003). *The Sociology of News*. London, UK: W.W. Norton.
- Short, J. C., & Palmer, T. B. (2008). The application of DICTION to content analysis research in strategic management. *Organizational Research Methods*, 11(4), 727–752.
- Smith, G., & Setälä, M. (2018). Mini-publics and deliberative democracy. In A. Bächtiger, J. S. Dryzek, J. Mansbridge, & M. Warren (Eds.), *The oxford handbook of deliberative democracy* (pp. 299–314). Oxford: Oxford University Press.
- Strinati, D. (1995). *An Introduction to Theories of Popular Culture*. London, UK: Routledge.
- Suiter, J., & Farrell, D. M. (2011). The parties' manifesto. In M. Gallagher & M. Marsh (Eds.), *How Ireland Voted 2011: The Full Story of Ireland's Earthquake Election* (pp. 29–46). London: Palgrave Macmillan.
- Suiter, J., & Reidy, T. (2019). Does deliberation help deliver informed electorates: Evidence from Irish referendum votes. *Representation*, 1–19. doi:10.1080/00344893.2019.1704848
- Torney, D. (2019, March 29). *What's in Ireland's landmark climate change report?* Retrieved from <https://www.rte.ie/brainstorm/2019/0329/1039327-whats-in-irelands-landmark-climate-change-report/>
- Warren, M. E. (2008). Citizen Representatives. In M. E. Warren & H. Pearse (Eds.), *Designing Deliberative Democracy* (pp. 50–69). Cambridge: Cambridge University Press.

- Weber, R. P. (1990). *Basic content analysis*. Newbury Park, CA: Sage Publications.
- Wessler, H. (2008). Investigating deliberativeness comparatively. *Political Communication*, 25, 1–22.
- We the Citizens. (2011). *We the citizens speak up for Ireland: Participatory Democracy in Action – a Pilot*. Dublin: We the Citizens. Retrieved from <http://www.wethecitizens.ie/wp-content/uploads/2015/05/We-the-Citizens-2011-FINAL.pdf>
- Williams, K. (2003). *Understanding Media Theory*. London, UK: Arnold, Hodder Headline Group.

Appendix

The coding system used

CONTEXT CODES:

Action	Action based, call to action, plans for action, funding allocated for action, (planned) change to policy for action to specifically mitigate/adapt to climate change
Funding	Funding has been allocated to a climate related project/organisation/institute from government/EU
<i>Citizens' Assembly</i>	Any mention of the <i>Citizens' Assembly</i> climate change sessions
Impacts	Refers to any text which discusses/mentions/indicated impacts as a direct result of climate change
Other	Falls into another category, not already incorporated into this list
Health	Climate change impacts on human health (can also refer to animal or biotic health)
Communication	Climate change in the context of communicating climate science/climate policy, etc.
Arts	Climate change the subject of an arts project
Policy	Policy indicated directly – in any format, associated with climate change (can be: policy needs to change/policy creating barriers/politicians' role in addressing climate change/government input required, etc.) Also includes politics in a general sense and its (in)ability to address climate change.
Agriculture	Agriculture discussed in association to climate change
Transport	Transport discussed in association to climate change
Energy	Energy discussed in association to climate change

TONE:

Negative	There is a negative tone or message to the content
Neutral	There is a neutral tone or message to the content
Positive	There is a positive tone or message to the content

RELIANCE ON EVIDENCE:

Very High	The term 'climate' or 'climate change' is used in the text in the context of anthropogenic climate change and directly refers to evidence in research journals or projects or refers to reports by reputable bodies (e.g. EPA).
High	The term 'climate' or 'climate change' is used in the context of anthropogenic climate change. May discuss specific associated issues. May refer to evidence without referencing specific papers or research. May speak to an expert (head of reputable environmental organisation/Dr./Prof. in climate related areas), or involve politicians making change/discussing change.
Medium	The term 'climate' or 'climate change' is used in the text while connecting it to/ attributing cause to human induced change.
Low	The term 'climate' or 'climate change' is used in the text about change to the climate but without linking it to human induced change, or, actively suggests it is due to natural processes. Or the term is used in correct context but in passing with relation to the remainder of the article.
None	The term 'climate' or 'climate change' is used fleetingly in the text, NOT in the context of climate change due to human action. Irrelevant to this study.
