

Mapping Press Narratives of Decarbonisation: Insights on Communication of Climate Responses

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Abstract: Responding to the impacts of climate change by reducing carbon emissions requires significant social transformations including changing social practices as well as public expectations of the good life. However, reports of increasing public apathy about climate change and doubts about our collective ability to tackle the challenge, represent barriers to broad citizen participation with processes of decarbonisation and low carbon transition (LCT). This has led researchers to focus on communication strategies that connect public(s) with climate responses. In other words, public engagement strategies that move beyond simply 'telling science' and a focus on science literacy. This shift has implications for news media analysis of LCT. As conveyors of mainstream public narratives about decarbonisation, news media discourses, have significant persuasive power and can connect citizens with LCT by shaping future imaginaries and/or expectations about societal responses to climate change. However, few studies zone in on press discourses of LCT and evaluate press narratives about decarbonisation. Therefore, this interdisciplinary analysis maps Irish press discourses of LCT to develop novel insights for communication about building socially resilient climate responses. It critically assesses the narrative components of press discourses and assesses how the dominant narratives about LCT perform as affective inputs. The findings show that storylines of dominant discourses present apocalyptic visions of the consequences of inaction or promote narratives of stasis via business-as-usual predictions of green benefits. Crucially, these narratives do not offer visions of social or cultural change, or describe collaborative approaches for reducing our high carbon lifestyles. Thus, the Irish press narratives about climate responses close down possibilities for connecting with public(s) and building socially resilient solutions. The findings illuminate the need for journalism about climate responses to incorporate a wider range of narratives about LCT and the study highlights a role for scientists in contributing to socially compelling narratives of decarbonisation.

Keywords: Press Narratives of Decarbonisation, Climate Change Communication, Representations of Low Carbon Transition

The Cultural Turn in Climate Change Communication

TO call climate change an unprecedented global environmental problem only begins to capture the scale and complexity of the efforts needed to tackle climate change impacts. In particular, climate change is unparalleled in terms of the scope and urgency of collective action required and scholars increasingly focus on understanding climate change as a social challenge and developing ways to socialize the climate change debate. In other words, there is growing recognition of the need to engage citizens in debate and actions about climate responses and the societal processes for reducing carbon emissions. For example, noting the post-COP21 context and calling for studies of low carbon narratives, Flottum and Gjerstad (2017, n/a) point out 'The climate debate has now clearly moved from the question of causes and attributions towards possible solutions to the challenge'. Likewise, Nerlich et al. argue

Whereas the 20th century was the century of the gene... the 21st century will be the century of 'carbon' whose meaning needs to be studied, preferably before the era of 'a post-carbon society' (2010, 105)

This study responds to these calls for qualitative analysis of public and media discourse about carbon, and the shift in emphasis for climate change communication in the post-COP21 context,

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MAPPING PRESS NARRATIVES OF DECARBONISATION

by mapping press narratives of decarbonisation and evaluating news media representations of climate responses.

To do so, it takes its starting point in the Cultural Turn in media studies of climate change (Boykoff and Crow 2014; Hulme 2013; Phillips et al. 2012). This school of thought rejects simplistic views of the communication challenge as a linear process of delivering top-down expert knowledge, and of audiences as passive receivers of information. Instead, it recognises the value of exploring wider facets of influence on public engagement such as local framings of the problem, acknowledging citizen's concerns and emotional attachment, as well as non-expert climate perceptions (Moser and Berzonsky 2015; Moser 2007; Nerlich et al. 2010). These scholars argue that culture, as the means by which we create shared meanings, 'is where the battle for the relative importance of climate change compared to other priorities still has to be fought and won.' (Rowson and Corner 2015, 25).

A cultural lens also provides an alternate conceptualization of the communications challenge associated with engaging public(s) with climate change. Drawing on Hulme (2013), it turns analytical attention on all aspects of human life in relation to climate change, rather than focusing on economics, environment or physical sciences. Thus, it targets climate change fatigue, public apathy and the social organization of denial around climate change (Norgaard 2011) rather than a lack of public knowledge of climate change as the central communications challenge. In particular, this school of thought prioritizes the need to 'break the climate silence' and overcome cultural barriers by encouraging necessary conversations in everyday encounters between individuals and others (Rowson and Corner 2015).

As a result, a large body of research in this domain has investigated the language used to communicate climate change (Flottum 2017) and LCT (Hellsten et al. 2014; Nerlich 2012; Nerlich et al. 2011; Koteyko et al. 2010; Nerlich and Koteyko 2009). These studies have noted the influence of linguistic devices on public engagement, particularly within print media analysis (Flottum et al. 2014; Hellsten et al. 2014; Nerlich et al. 2010; Pettenger 2007). It has also shown that news texts have the power to arouse emotional currency and foster affective (dis)engagement (Smith and Leiserowitz 2014; Spence and Pidgeon 2010; Whitmarsh 2009). However, researchers also caution that instrumental approaches, such as the deployment of strategic communications to engage publics in debates are problematic as they narrowly view the public as 'a body in need of enlightenment and persuasion by "experts"' (Pearce et al. 2016, 620). These critics point out that the focus on framing or wording messages to act as levers to produce public acceptance, obscures a broader public debate about climate change as a systemic, socio-economic, political and cultural issue (ibid.). Meanwhile, building on language use, recent research has begun to examine climate narratives (Flottum 2017; Flottum and Gjerstad 2017; Smith et al. 2014). These researchers argue that the stories about climate change shape public opinions, and thus are important analytical sites for thinking about communications strategies.

Therefore, drawing on a cultural lens, this study investigates how press narratives motivate or mobilize audiences at the experiential/emotional level. In other words, rather than analyzing how press reports translate climate science to shape public understanding and knowledge, it assesses press narratives to shed light on the discursive resources made available to share feelings, concerns and experiences about LCT.

Analysing News Media Representations of Decarbonisation

By investigating LCT, which represents the materialization of climate change responses, this study targets the multi-dimensional processes for achieving decarbonisation. As a unit of analysis, LCT enables identification of the range of carbon reduction activities (social, technical, policy and financial) reported in print media. It also opens up an important and productive distinction between climate change as public debate about climate science and questions of 'whether to' and 'why' to respond and public debate about the societal choices for reducing carbon activity which involves questions of 'How to' and 'How much'. Thus, it shifts emphasis

from the communication about climate science and the associated challenge of effectively communicating scientific evidence about environmental impacts and social risks, to public discussion of the more tangible, everyday actions and processes for decarbonizing society. However, this does not reduce the complexity of the communications challenge. Indeed, public discussion about LCT as a multi-faceted process of decarbonizing our high carbon systems is profoundly political. It raises important questions about values and ethics as well as issues of power-relations and epistemic politics associated with expert-lay knowledge interactions in socio-technical transitions. Thus, communication about climate responses requires the social (re)contextualization of techno-scientific processes and therefore, news media debate about LCT represents a novel communications challenge for key social actors and journalism.

Ireland and LCT: Alternate Insights on Press Representations in Small States

The study examines Irish press discourse as an alternative to studies of UK, US and northern EU print media which dominate news media analysis of climate change, and to add to the growing empirical research on Irish media representations (Rau and Fox 2016). As Little and Torney (2016) argue, Ireland is interesting for both its peculiarities and for what it shares with other countries. For example, as an EU member Ireland is expected to play a leadership role in tackling climate change and to meet EU CO₂ emissions and renewable energy obligations. However, as a small state, Irish climate change discourse has a tendency to pay less attention to macro-global issues and to emphasize insular concerns about climate change. In particular, the contribution of farming to Irish GDP, the focus on rapid growth of the agricultural sector², Ireland's dependence on imported sources of energy and more recent community resistance to energy transition (Mullally and Byrne 2016) place Ireland at the coalface of the significant social challenges around decarbonisation and decoupling growth and emissions.

Therefore, this paper maps the variety of print media discourses about LCT across a range of articles in the Irish broadsheet and tabloid press between 2000 – 2013. This period marks the early stages of Carbon Tax debate in Ireland up to the end of the Irish Presidency of the EU and final discussions of EU policy on LCT. While there have been significant developments in media and public discourse since 2014, for example an increase focus on technological innovation around renewable energy and community resistance to windfarms and supergrid technology (Mullally and Byrne 2016), observationally this reached a high point during 2014-2015 and has since ebbed.

Furthermore, the timeframe under investigation includes several failed attempts at enacting Climate Legislation³ and associated media and public debate about a Carbon Tax, which led to a focus on financial and market instruments for achieving emissions targets, rather than discussion of technological processes (McNally 2015). It also includes a period of extreme national economic and fiscal crisis following the global financial crisis in 2008 and therefore it is expected that Irish press representations should provide a diverse range of discourses to inform nuanced insights about communicating climate responses. Thus, while the findings are not generalizable, they have wider relevance in terms of beginning to map the landscape of potential press narratives about decarbonisation. Arguably, Irish press discourse offers insights on the dynamics of public debate about transition beyond the focus on questions of energy technology which dominate in other EU countries.

Mapping Press Narratives of LCT

News media analysis of climate change is a vast field of research attracting a range of disciplines from political, environmental and science communication and research approaches. This review

² Agriculture makes up one third of Ireland's GHG emissions, which is high compared to other EU states and there are fewer abatement opportunities in this sector which presents problems for meeting Ireland's Food Harvest 2020 targets

³ Finally enacted as the Climate Action and Low Carbon Development Act in 2015

begins by examining how this study contributes to this body of knowledge by zoning in on media and LCT. It then outlines the key perspectives in the literature on climate change narratives, including the advances in narrative analysis of climate change and the significance of the approach undertaken in this study. Finally, it examines the literature on resilience and especially societal resilience to highlight the usefulness of this concept in terms of developing novel insights for communication strategies about LCT.

Despite the scholarly diversity and recognition of the complexity of climate change as a phenomenon (Hulme 2009), research interest has concentrated on investigations of climate science and/or climate impacts. For example, early studies, in line with a focus on climate change as a physical phenomenon and concern about the public understanding of science, examined the accuracy of news media coverage of climate science (Boykoff and Roberts; Antilla 2005). Researchers also examined the influence of media ideology on coverage (Gunster 2012; Howard-Williams 2009; Carvalho 2007). However, recent interest in how news media representations shape the symbolic context, has led to a focus on language use in media representations. These studies have examined the deployment of metaphors (Atanasova and Koteyko 2017; Shaw and Nerlich 2015; Nerlich 2012; Asplund 2011), interpretative repertoires (Ereaut and Segnit 2007 and 2006) and climate narratives (Flottum and Gjerstad 2017; Wozniak et al. 2014; Smith et al. 2014; Smith 2012; Krovel 2011). While these studies offer novel insights for communication and journalism about climate science and impacts, relatively few studies specifically target climate responses.

Significantly, within the nascent field of media representations of LCT, researchers have concentrated on one dimension of a multi-dimensional issue. For example, Cherry et al. (2013) investigated low carbon housing, Kouri and Clark (2014) assessed the framing of green jobs, and Uusi-Rauva and Tienari (2010) examined climate change and energy policy in press coverage. Most notably, this scholarship has focused on assessing coverage of energy transition (Djerf-Pierre et al. 2015, Maesele et al. 2015). However, as Maesele et al. (2015) point out, zoning in on a particular technology or process delimits public deliberation about the range of alternatives associated with energy transition. Furthermore, post-COP21, as political momentum begins to concentrate on actions to tackle climate change through processes of decarbonisation, this study argues there is need for analysis of media debates about LCT as a multi-dimensional process. In other words, there is a gap in knowledge about news media representations of the societal choices for reducing carbon activities in daily life.

Therefore, this study investigates news media discourses about LCT as a contribution to traditional print media analyses of climate change and argues that this is significant for two reasons. Firstly, assessing press discourses about LCT is important because the choices around carbon reduction activities are what public(s) will engage with in practice. Secondly, as a future-oriented debate, media discourse influences public perception of LCT. Press discourses shape our future imaginaries and have implications on the stories we tell ourselves about building societally resilient climate responses. The following discussion expands on this point of view.

Narrative Analysis and Media Representations of Climate Change

Narratives are one of the earliest forms of communication, preceding writing and occurring across different cultures and civilizations. In essence, narratives are simple stories that describe a problem, present the consequences and suggest solutions (Dahlstrom 2014). This definition suggests a strong connection with the notion of frames from media analysis and narratives are also recognized an important journalistic strategy for presenting and organizing coherent news stories (Wozniak et al. 2015; McComas and Shanahan 1999, Gamson and Modigliani 1989). Thus, narratives are not only a feature of long form stories, but as Wozniak et al. (2015) point out, they are potentially to be found in every news report. Additionally, as Flottum and Gjerstad (2017) argue, the field of textual linguistics with its focus on analyzing components of narratives, enables analysis of nonfictional texts such as news reports. They point out that ‘the narrative

perspective makes it possible to identify the presence or absence of typical story components such as initial situation, complication, reaction, resolution and final situation and to identify different characters or actors (such as heroes, victims, villains)' (*ibid.* n/a). In particular, they note that stories are centrally about a character (hero) going on a journey and thus that the most compelling stories focus on action rather than complication (*ibid.*).

The growing literature on climate change narratives includes research on citizens' narratives about LCT (Phillips and Dickie 2015, 2014) as well as climate change narratives in media and policy reports (Flottum and Gjerstad 2017; Flottum 2013; Smith 2012; Krovel 2011). Narrative analysis is an established method within policy studies and a significant body of research within this discipline (Jones 2014a; Jones 2014b) has established that the hero character has a stronger persuasive impact than other narrative characters. In their analysis of climate change narratives, Flottum and Gjerstad (2017) argue a lack of climate heroes could explain why public opinion fails to coalesce around a set of policy options for climate mitigation. Interest in narrative and storytelling is also a feature of science communication where researchers have noted the persuasive power of narratives when communicating with non-expert audiences (Dahlstrom 2014). For example, research has shown that presenting facts in a narrative format has the potential to increase its uptake (Dahlstrom 2012; Graesser et al. 2002).

While frames, discourse and narratives are related approaches for analyzing media content, they focus on different aspects of the text and therefore offer different insights on implications of news media treatment. Elaborating on this, Schäfer et al. (2016) differentiate between two approaches to narrative analysis in media studies of climate change. The first approach, which examines narrative style, draws from literary and film studies and assesses journalist reporting in terms of how it adopts stylistic elements from familiar fictional genres. For example, Wozniak et al. (2014) employed this approach in their analysis of the degree of narrativity found in news feature reports. The second approach, topical narratives, focusses on identifying components of storylines and thus examines the qualities of narrative elements such as metaphor, tone etc. such as in Foust and O'Shannon Murphy's (2009) analysis of apocalyptic framing. While this bears a close resemblance to issue frames, narrative analysis differentiates itself by examining the way the message is rendered as a story whereas frame analysis sheds light on the arguments deployed in news texts. Significantly, it is the narrative qualities that hold the persuasive power for audiences (Schäfer et al. 2016). Additionally, Wozniak et al. (2014) argue that frame analysis is limited, as it doesn't offer insights on the tone or issues behind the frame. Thus, narrative analysis of news media discourses offers more nuanced insights about media texts.

Synthesizing the key features of the literature on narrative analysis, this study examines press discourses as carriers of narrative components rather than traditional notions of narrative within literary studies. Likewise, it examines topical narratives rather than overarching narrative style or genre and evaluates the narrative elements in terms of their tone, linguistic devices, storylines and characters or agents. Crucially, narrative analysis enables assessment of how the components of press discourses perform as affective inputs by connecting with public(s). Thus, this approach eschews the instrumental focus on identifying the right words to achieve behaviour change. However, it is important to note that public(s) are not passive receivers of information as audience interpretations of news media texts are heterogeneous. In other words, the study does not claim to reveal audience interpretations of media narratives, instead the findings offer more nuanced starting points for future audience reception studies of press narratives about LCT.

Low Carbon Transition and Building Societal Resilience

The study also draws on the concept of resilience as this offers a productive framework for understanding change processes such as LCT. The concept of resilience permeates popular and scientific debates especially around global environmental change. While it is rooted in theory from ecology and biophysical sciences, resilience is increasingly seen as a societal way of responding to ecological disturbances. For example, President Obama urged citizens to be resilient in his address following Hurricane Sandy, when he said 'We go through tough times, but

we bounce back’ (Obama 2012 cited in McGreavey 2015, 104). As a discourse, resilience implies an ability to cope, no matter how dire the circumstance and resilience thinking provides alternate approaches to understanding vulnerability and agency in response to ecological disaster. But it is not only relevant to ecological systems, Adger et al. (2011, 696) note that ‘resilience provides a framework for understanding change of people, places and ecosystems’ and that it encompasses more than the ability to absorb shock or disturbance. They argue that resilience thinking also incorporates the opportunity that arises from disturbance and the ability to evolve. ‘Resilience is the ability of a system to absorb change while retaining essential function; to have the ability for self-organisation and to have the capacity to adapt and learn’ (*ibid.*, 696)

Thus, within this framework, empowered citizens engage with difficulty rather than becoming overwhelmed, avoiding or denying challenges and they do this by finding ways through creative collaborations of overcoming change and reasserting control (*ibid.*). However, the concept also has its critics, particularly in relation to climate change and sustainable development. These scholars highlight the focus on processes rather than outcomes and a tendency to normalise climate resilience as processes of control, such as climate proofing (Adger et al. 2011). They argue that processes of control are simply ways of doing development better and thus maintain the status quo. Building on this, Brown (2014) argues dominant understandings of resilience fail to consider the social, political and cultural dynamics and therefore greater emphasis needs to be placed on ideas of community resilience, social transformations and the potential for radical change as responses to sudden events and ecological disasters. Advancing the notion of societal resilience, Brown argues ‘[T]he transference of ideas about ecological systems to the social realm is viewed as highly problematic’ (*ibid.* 109) and therefore advocates moving beyond the reductive ‘conservative’ conceptualisation of resilience towards more deliberative forms rooted in ideas of social transformation as responses to change.

Given that LCT involves societal transformations in conjunction with technological, financial and policy processes, the concept of resilience provides an important framework for assessing press narratives of decarbonisation. It offers a way of reasserting the social and presents an alternative to the ‘economic miracle’ rhetoric associated with techno-innovation. Within a societal resilience framework, visions of the future are strongly concerned with possibilities for social transformations. Therefore, rather than descriptions of victims, vulnerability and passivity, societal resilience stresses human agency and empowerment.

Research Method

The paper draws on data collected for a multi-modal thematic analysis of press representations of LCT across a range of story types in Irish broadsheet and tabloid papers between 2000 – 2013⁴. The corpus of data used for analysis was composed of all articles from Irish national newspapers available on Lexis Nexis newspaper database. To ensure the final corpus provided an accurate account of the balance of technical, economic and social understandings of LCT, keyword searches for both expert and lay citizen conceptualisations of LCT were undertaken (McNally 2015). This research identified 347 articles and found 14 discourses about LCT (McNally 2016) which were thematically combined in terms of how their linguistic components perform as affective inputs. This process revealed four discursive themes in Irish press discourse about LCT: Distancing, Consensus, Controversy and Empowerment (see Figure 1).

The current study further investigates these discourses by analysing their narrative components. The assessment follows the best practice guidelines for analysing climate narratives (Schäfer et al. 2016) and draws on Flottum’s (2014) textual linguistic analysis approach to assess

⁴ The data set includes eight nationally available papers: The Irish Times, The Irish Independent, The Irish Examiner, The Irish Daily Mail, The Sunday Independent, The Sunday Tribune, The Sunday Business Post, The Irish Mirror & Sunday Mirror (see McNally 2015 for details)

storylines, agents, linguistic devices and tone. Additionally, the three dominant discourses about LCT were critically evaluated in terms of i) how they perform as affective inputs and ii) whether/how they harness ideas about societal resilience. The analysis focussed on identifying the persistent discursive trends, in other words, the prevalent discourses are dominant because they occur across all the publication types and are consistent features throughout the time frame.

| | |
|---|---|
| <p>Distancing</p> <p><i>Climate Catastrophism (Bleak Future)*</i> <i>Climate Governance (No Choice/ No Alternative)*</i> Techno-Optimism Carbon Enlightenment (<i>Weak</i>)</p> | <p style="text-align: right;">Consensus</p> <p>Carbon Fetishism (<i>Positive</i>) Carbon Leadership <i>Carbon Utilitarianism (Economic Benefits)*</i></p> |
| <p>Carbon Enlightenment (<i>Strong</i>) Green Consciousness* Carbon Justice (<i>Cosmopolitanism</i>)</p> <p>Empowerment</p> | <p>Carbon Scepticism* Techno-Scepticism Carbon Fetishism (<i>Negative</i>) Carbon Justice (<i>Communitarianism</i>)</p> <p style="text-align: right;">Controversy</p> |
| <p>* = Dominant Discourse</p> | |

Figure 1: Map of Irish Press Discourses about LCT
 Source: McNally 2016.

Findings

The findings offer a cultural understanding of Irish press narratives and are presented in two sections. The first section describes the range of discourses and narrative trends within the four discursive themes (see Figure2). The second section presents an in-depth, narrative analysis of the three dominant discourses:

- (i) ‘Bleak Future’, an environmental discourse about the threat of climate catastrophe
- (ii) ‘No Choice/No Alternative’, a policy discourse on the obligation to meet EU and international regulations
- (iii) ‘Economic Benefits’, a business discourse about economic growth and green jobs

Insights on the Range of Irish Press Discourses about LCT

While the findings reveal a wide range of discourses, there are some striking absences and marginalizations. For example, the time frame under investigation (the emergence phase), is notable for the absence of energy narratives in press discourse. Likewise, there is a limited and reductive focus on technology primarily in terms of business innovation rather than presenting potential scientific or social implications of techno-innovations (discussed below).

Distancing

Discourses in this theme employ some of the most dramatic and sensational storylines about LCT and are closely associated with environmental organisations and journalists. The most prevalent discourse, Climate Catastrophism presents stories about a ‘Bleak Future’, while its counter-part, a weak variant of Carbon Enlightenment, presents light-hearted storylines of ‘small changes’ associated with ‘bright-siding’ – a social marketing technique which has received criticism for down-playing the severity of the climate challenge (Spratt 2012). Also prevalent, Climate Governance focusses on global events, especially international climate governance as well as EU policy frameworks. In doing so, it associates discussion of LCT with distant negotiations

MAPPING PRESS NARRATIVES OF DECARBONISATION

involving elites and bureaucratic concerns. This storyline focusses on the ‘national’ or ‘public’ duty to meet international obligations as well as highlighting the threat of legal and financial punishment for failure to achieve the necessary targets. Techno-optimism features stories about the business potential of techno-innovation, especially around green energy development and the supergrid. In other words, it is primarily discussed as part of the rhetoric of economic opportunity rather than as having wider socio-technical implications. Furthermore, despite the extensive technological aspect of regime change associated with LCT, this is rarely a topic in Irish press discourse. Thus Irish press treatment differs from comparable international studies as it downplays discussion of the regime change associated with new technology infrastructure.

Climate Catastrophism (Bleak Future)

“Climate change will ravage our planet, our prosperity and security”

Climate Governance (No Choice)

“Ireland is legally obliged to keep greenhouse gas emissions to just over 63 million tonnes per annum”

Green Consciousness

“Audit your lifestyle to determine ways of playing your part in reducing carbon emissions”

Carbon Enlightenment (Strong)

“Success depends on profound behavioural changes in consumption, travel and heating”

Carbon Utilitarianism (Economic Benefits)

“Cutting emissions will make us better off as well as bringing huge business opportunities in developing new technology”

Carbon Leadership

“It’s up to the Government”

Carbon Scepticism

“An abysmal failure because the Government failed to take on vested interests”

“Weaning our economy off fossil fuels is going to be a very difficult task”

“Climate change policies must not undermine Ireland’s global competitiveness”

Figure 2: Examples of Prevalent Irish Press Discourses about LCT
Source: McNally 2016.

Controversy

These emotive and compelling discourses present a range of alternate perspectives on LCT, including elite techno-managerial visions as well as voicing social and community resistance to energy transition. However, while diverse, the majority of discourses are united in their focus on promoting rational self-interest and prioritising economic interests. They do not explicitly challenge the rationale for reducing emissions advanced in the *Consensus* theme. In particular, the dominant discourse, Carbon Scepticism, challenges perceived environmental authoritarianism articulated in calls for top-down environmental regulations (i.e.) Climate Governance. For example, the Irish farming lobby argues regulating carbon emissions targets is anti-competitive, ‘[it] would have had a severe impact on agriculture without really addressing the problem’⁵. Prevalent discourses in this theme respond to developments in the social and political context. For example, Techno-Scepticism, challenges the simple solutions storyline (Techno-Optimism), while the communitarian variant of Climate Justice discourse highlights the unfairness of environmental regulations on local, vulnerable communities such as the elderly or the poor.

Consensus

The discourses in this theme dominate across the Irish press post-2009. Uniquely, they present storylines about processes for achieving LCT and are associated with political and business actors. Thus, these discourses construct a vision of the future dominated by elite expectations

⁵ ‘Forests, fields key to future’ *The Irish Times*, 25.03.2011

about LCT. The story they tell is of future economic-oriented hope or rejuvenation (Carbon Utilitarianism) which is achieved either by strong leadership through policy-making (Carbon Leadership) and/or market measures (Carbon Fetishism). Significantly, these discourses promote the ‘commonsense’ rationalist argument of economic benefits and thus evaluate LCT in terms of compatibility with existing needs and social norms, thereby prioritising continuity over change.

Empowerment

These discourses construct the most socially-focussed visions of LCT and are related to environmental organisations’ expectations. The storylines feature individual, local and community agency as well as constructive ways of connecting with climate-friendly behaviour. However, these are also the least prevalent discourses, particularly post-2009. Furthermore, both Carbon Enlightenment, which presents storylines of profound social and environmental change and Carbon Justice’s (globally focussed) cosmopolitan discourse, offer an alternative to the ‘Hope Gap’ (Upton 2015) associated with Climate Catastrophism and claims that news media sensationalise accounts of climate change (Cottle 2009; cited in Horsbol 2013) as well as prioritising reports of problems rather than solutions (O’Neill et al. 2015; Howard-Williams 2009; Ereaut and Segnit 2006). Thus, discourses in this theme respond to Urry’s (2011) call for ‘positive alternatives to high carbon lives, alternatives that become a matter of fashion and desire’ as well as Hall’s (2014, 23) call to ‘make room for both sacrifice and reward in our visions of a low-carbon future’ (*ibid.*). However, this theme is dominated by the Green Consciousness discourse which features storylines promoting biospheric concern which it prioritises LCT within a green agenda. This is significant as recent studies have found that environmental concern is not necessarily a primary motivation among those who choose to move to a low carbon lifestyle (Howell 2013).

Narrative Analysis of the Dominant Discourses about LCT

The three dominant narratives: Bleak Future, No Choice/No Alternative and Economic Benefits (see Table 1) present different rationales for decarbonisation in line with their discourse community’s perspective on LCT. Two narratives associated with environmental organizations (Bleak Future and No Choice/Alternative) were also prevalent across the entire timeframe, whereas the ‘Economic Benefits’ narratives, associated with political and business actors, dominates Irish press discourse post-2009 (McNally 2015). While all three discourses advocate LCT, they do not present storylines about specific decarbonisation processes or indicate that there are choices about LCT. Significantly, these discourses rarely feature storylines involving social involvement. Instead, the dominant narratives focus on the difficulty, risks and consequences of inaction and in doing so, they prioritize the complication component of narratives rather than societal actions and responses to climate change. The remainder of this section considers how the prevalent discourses perform as public resources for the stories we tell ourselves about tackling climate change. The focus is on understanding how the narrative elements of these discourses perform as affective inputs and whether they open up or constrain possibilities for connecting public(s) with LCT.

Overall, the dominant discourses present dramatic storylines of catastrophic (climate and economic) impacts. Crucially, these press storylines rarely present citizens as actors other than as ‘vulnerable victims’ of unfair environmental regulations. Thus, citizens are more often constructed as passive, rather than as active agents of change in constructive visions of possible post-carbon futures. There is also an absence of community voices and personal stories of achieving LCT and these storylines predominantly reference ‘national interests’ over regional, community or individual interests even though the latter are the sites where the everyday changes will take place and be felt the most. As a result, press treatment champions vague promises or threats about economic and environmental impacts rather than stories about tangible actions involving local communities. By presenting LCT in terms of reductive binaries – either as promises (of economic growth and jobs in Economic Benefits narrative) or threats (of economic

MAPPING PRESS NARRATIVES OF DECARBONISATION

penalties and environmental catastrophe in Bleak Future narrative), the dominant storylines focus on complication over action. In other words, they are not narratives of action driven by heroes, but of environmental consequences, economic complications and victims or villains. Although the dominant narrative post-2009 (Economic Benefits) presents assumptions about the financial gains of LCT, it does not offer a vision of future change in terms of either environmental concern or of the social transformation associated with LCT and regime change.

Table 1: Samples of Dominant Discourses

| | <i>Example of Discourses</i> |
|--------------------------------------|---|
| <i>Bleak Future</i> | <p>Ironically, great progress has been made in the efficiency of low-carbon technologies such as wind, solar and wave energy in recent years. Whether realpolitik will allow governments to prioritise investment in the low-carbon industry in time to avoid the worst effects of irreversible climate change remains an open question.</p> <p><i>No relief as climate change accelerates, The Irish Times, 30.05.2013</i></p> <p>“It is still possible to change the grim prospects for 2050 if governments opt for a greener growth path,” the outlook says, but it warns that “the window of opportunity is closing fast”. One of the urgent actions it recommends is to start pricing carbon in 2013.</p> <p><i>OECD warns of catastrophic climate change, The Irish Times, 25.11.2011</i></p> <p>The scientific evidence is now overwhelming: climate change is a serious global threat and it demands an urgent global response.... The scale of disruption "would be similar to those associated with the great wars and the economic depression of the first half of the 20th century".</p> <p><i>Stern review: the main points, The Irish Times, 31.10.2006</i></p> |
| <i>No Choice/ No Alternative</i> | <p>The Bill will make the EU targets for 2020 the national targets, obliging the state to show it will comply.</p> <p><i>Political reality stymies action on Climate Change, Irish Times, 26.02.2013</i></p> <p>The Governmental commitments under the Kyoto protocol are only a start. Every person has responsibility to reduce their carbon footprint, and this must be done quickly now that the very obvious effects of climate change are upon us.</p> <p><i>Wiping your carbon footprint clean, The Irish Times, 19.09.2008</i></p> |
| <i>Economic Benefits</i> | <p>"Ireland has the potential to generate far more wind energy than we could consume domestically. The opportunity to export this green power presents an opportunity for employment growth and export earnings which we must seize if we can."</p> <p><i>Sales in our wind, The Irish Times, 6.04.2013</i></p> <p>The increase in my department's allocation will go directly into providing thousands of jobs for Irish people and it reflects the fact that the Government has decided that sustainable energy and building our broadband infrastructure represents the best kind of stimulus for the Irish economy.</p> <p><i>Massive boost for green jobs, says Ryan, Irish Examiner, 10.12.2009</i></p> |

Source: Data Adapted from McNally 2016.

The dominant narratives also provide the most colourful, descriptive and poignant ways of talking about LCT. For example, the most emotive, heightened linguistic devices are associated with Bleak Future. Furthermore, the most bureaucratic and least descriptive linguistic elements (i.e.) those employing minimal use of metaphor, analogy or buzzwords, are associated with the Economic Benefits narrative. Also worth noting, the Irish press deploy particularly emotive resources when discussing carbon emissions, which are a mainstay of news reports about LCT. For example, rising carbon emissions are ‘ballooning’ ‘accelerating’ ‘soaring’ ‘going through the roof’. While reducing emissions involve ‘radical decreases’ and ‘slashing onerous/daunting or stringent targets’. In other words, Irish press deploys linguistic devices that highlight the epic nature of reducing carbon emissions and invoke descriptions of an impossible battle involving massive responses. Consequently, narrative elements about carbon heighten the scale of the challenge and focus on the impossibility of successfully tackling it. Furthermore, citizens are represented as victims of emissions targets who are ‘hit’ by the draconian measures needed to reduce carbon emissions.

Overall, the analysis reveals that the dominant stories about LCT perform poorly as affective inputs and promote narratives of stasis (i.e.) business as usual by describing a future without heroes, social transformation or compelling visions of energy transition. It also reveals striking similarities between Irish press discourses about LCT and about climate change, despite their distinct differences as communications challenges. That is, dominant press narratives about LCT replicate existing climate change discourses. In doing so, they fail to connect citizens with experiences, and/or expectations, about transition as a process involving changing lifestyles, social transformation or opportunities for creative, community collaborations. This finding highlights a clear opportunity to develop more productive, publicly available narratives about decarbonisation. In addition, this analysis shows that Irish press discourses are not primarily stories of a technologically advanced nation and that Irish press treatment of decarbonisation differs from comparable media studies of LCT, where researchers have identified a marked techno-optimism (Assayami and Ishi 2017; Djerf-Pierre et al. 2015).

Implications of Irish Press Narratives about Decarbonisation

The findings indicate that the dominant narratives are not stories with significant cultural traction and thus, consistent with other media analyses of LCT (Assiyama and Isihii 2017; Djerf Pierre 2015; Maesele 2015; Kouri and Clarke 2014; Cherry et al. 2013), they confirm the need for greater social (re)contextualization of expert and elite debate about LCT. Nevertheless, how do the narrative elements in Irish press perform in terms of building societally resilient climate responses?

How Press Narratives about Decarbonisation Constrain Resilience

In general, the imaginative stances offered are reductive and primarily attuned to elite concerns with national economic interests or dire predictions of environmental or economic catastrophe. They also promote a modernist belief in mastery and control through top-down governance over creative collaboration and social transformation. While Irish press treatment stands in contrast to the focus on techno-optimism in comparable international studies, by prioritizing financial instruments and regulation, the dominant discourses still promote political actors or technology as responsible agents. Thus, the narrative elements close down possibilities for human agency, empowerment or future hope, which are important contributions to societal resilience. The notable absence of heroes not only influences narrative persuasiveness and opportunities for connecting public(s) with transition pathways; it also marginalizes stories about the human capacity for good. The dominant narratives characteristically present a world distant from everyday life, which omits stories of citizen-led involvement in environmental action or energy

MAPPING PRESS NARRATIVES OF DECARBONISATION

transition. Instead, the active agents of LCT, and those charged with responsibility, are business elites and government actors, whereas citizens have little agency beyond green consumer consumption. Thus, dominant narratives do not present stories of personal transformation or acting for the common good.

How Press Narratives about Decarbonisation Build Resilience

The findings show that resilience thinking is rarely found in this corpus of Irish press reports about decarbonisation. Crucially, the narratives most associated with building resilience (the Empowerment theme), were the least deployed discourses in the Irish press. The absence of references to social resilience and/or social learning associated with LCT regime change is also highly significant. As Carvalho et al. (2011) point out building a low carbon society involves preparing for society's uncertain future and therefore requires a 'compelling social vision' as well as an economic one. They argue this also involves preparing future generations to live and work in a post-carbon world and that '[K]nowledge will be key in fostering a Post carbon society and ensuring a smooth transition' (*ibid.*, 1845). In other words, LCT involves a massive project of retraining a low carbon workforce and education about future low carbon jobs. The analysis also indicates there is opportunity for press treatment to personalise or humanise stories about LCT. For example, there is considerable scope to increase discussion and analysis of community energy schemes, highlighting why people get involved, what they get out of this involvement as well as the community and family benefits. These discussions also offer the possibility to introduce new ways of talking about responding to change associated with LCT by promoting individual and collective agency. This could also stimulate new conversations around renewable energy, sustainable technology and potentially articulate more culturally meaningful discussions about the significant regime changes involved with LCT.

Above all, the narrative analysis indicates that societal connection with LCT, as a process of building collaborative and resilient climate responses, requires the development of new publicly available stories about climate change. The following section draws on the findings to develop recommendations for climate scientists and journalism praxis aimed at communicating about climate responses.

Suggestions for Science Communication and Journalism about Decarbonisation

Scientists and science communication can support democratically responsible journalism about climate responses by contributing narratives that tell the story of LCT as a social issue. That is, rather than focusing on 'telling science' and emphasizing science literacy associated with a public understanding of science model of communication there is a need for social (re)contextualization of science that 'connects' with public(s). For example, scientists and science organisations could play an important role in helping to socially (re)contextualise LCT as claims makers and voices of authority in press discourse. Smith (2005) argues that the science and policy community are potentially highly influential in telling the climate change story and crucially, in shifting the narrative. Smith points out that they can play important roles as '...a persistent source of ideas, advice, and critical feedback relating to climate change storytelling' (*ibid.*, 1481). This is highly significant in relation to Irish press treatment of LCT, as many of the articles were event driven and key social actors (especially the Environmental Protection Agency, business lobby groups and environmental organisations) held considerable sway in originating stories about Irish carbon emissions and influencing their narratives. This indicates an opportunity for scientists to raise awareness of the socio-cultural implications of new technologies associated with transition when acting as voices of authority in reports about climate responses and carbon reduction activity.

Related to this, the analysis also noted the absence of stories describing the social reality of carbon emissions, and showed that the Irish press rarely offered visions of citizen initiatives to

reduce our high carbon lifestyles. These insights suggest the need for news media to develop a more open and diverse discursive space for public debate about transition pathways. These omissions represent opportunities for democratically responsible journalism about LCT. For example, the majority of stories about LCT are the result of business journalism; they feature in business and news sections and tend to promote elite interests by focusing on elite organizations reports and views on carbon targets. This imbalance could be addressed by increasing coverage in the lifestyle or cultural sections and focusing on personal and community stories about the challenges and triumphs of reducing carbon in everyday lifestyles as well as the concerns and hopes about how LCT will influence future expectations and social progress. There is also a need for journalism that provides critical analysis of elite discourses in order to inform social learning. This could be achieved by giving greater voice to the variety of community and individual actions, expectations and experiences of reducing carbon emissions.

Overall, Irish press treatment would benefit from including a wider range of voices and intermediaries offering alternate perspectives to the 'simple solutions' and 'business as usual' approach to LCT. For example, Cross et al. (2016) highlight the value of stories of 'local heroes', that is those who take initiative or leadership roles to advance political action in local communities as well as stories of citizen action in general, arguing that these are more engaging than focussing on political failure. Based on their audience reception study of Canadian press, they argue that stories that build local knowledge, information and interest in low carbon actions and emphasize positive achievements are more likely to encourage people to become active participants in climate change action than stories of political failure. Furthermore, given print media's social shaping influence, they maintain that press treatment needs to promote stories of political initiative, creativity and courage that illuminate the countless examples of activism and engagement through which people in our communities and neighbourhoods are coming together in new forms of solidarity, community and action' (*ibid.*, 35).

Conclusion

This study mapped Irish press discourses of LCT to develop insights for science communication and journalism praxis. Rather than examining the implications of media representations on rational reasoning, the study examined Irish press discourses in terms of how their narrative elements performed as affective inputs and assessed whether they open up possibilities for building resilience thinking. In particular, it evaluated the dominant narratives in terms of connecting public(s) with societal resilience and alternate perspectives on the future, human agency and empowerment as well as social transformation. The study argued that analyzing news media discourses in this way, offers novel insights for how the social and natural sciences can collaborate to inform communication about climate responses.

The study found that the dominant discourses closed down opportunities for connecting public(s) with LCT and marginalized narratives offering visions of the socio-cultural aspects of transition pathways. It contributed new insights about media and climate change by showing that the Irish press prioritize narratives of stasis and marginalized narratives of social transformation. This indicates that dominant narratives constrain possibilities for social learning and societal resilience. This finding is important as the dominant press narratives constitute the mainstream, publicly available resources for citizens to 'connect' with LCT. In other words, these narratives illuminate the culturally embedded storylines that may need to be contested as part of moving toward future environmental sustainability and responsible low carbon societies.

The study also illuminates the need to consider the implications of existing climate mitigation narratives and offers strategies for journalism and science communicators. As Asayama and Ishii (2017) point out, while news media characteristically present simple, reductionist narratives about science and technology, this study has shown that social and political critique about the different trajectories for transition pathways can inform more socially compelling narratives about LCT which may connect with broader public(s). Thus the findings

MAPPING PRESS NARRATIVES OF DECARBONISATION

contribute to research highlighting news media inadequacy around climate change by adding empirical data on press narratives about climate responses. It also contributes to the literature on science communication and calls for science to evolve to become part of culture.

The study argues that narratives of LCT represent an opportunity for scientists (and science journalism) to inform cultural debate about LCT and socio-technical transitions more broadly. It also advanced the concept of societal resilience as a fruitful framework for developing productive stories of climate resilience and facilitating social learning. While the focus on cultural debate and storytelling about LCT in this study appears to suggest a diminished role for science communication, this is not the case. The focus on building societally resilient climate responses indicates an even greater need for scientists to act as voices of authenticity, by challenging or offering alternative discourses, to the rhetoric of economic benefits or techno-optimism (and techno-scepticism) that pervades news media and policy narratives about climate responses. Thus, future research should examine the challenges and opportunities for scientists and science communication to act as honest brokers in shaping future imaginaries around the myriad technological, social, financial and policy processes for reducing carbon emissions.

The study also highlighted an unintended consequence of the prevailing economic rationale for LCT on the stories we tell ourselves about moving to a low carbon future. Crucially, it showed that while this narrative gives citizens some agency in their role as green consumers, it also restricts their democratic imagination by offering a narrow glimpse of the possibilities of performing active citizenship in developing a low carbon society. This finding is significant as the economic mantra about LCT has become a prominent feature across the EU post-COP21, especially in policy and public engagement discourses around climate mitigation.

However, as one of the first studies to map press narratives around the multi-dimensional processes for LCT these findings are not necessarily generalizable. In particular, although the insights have broader relevance in terms of developing knowledge of the mainstream narratives about transition pathways, further studies are needed to establish whether they are replicated in other countries and audience studies are needed to establish how citizens interpret these storylines. Thus, future research should investigate how expert and elite discourses about LCT are socially (re)contextualized in other countries as studies have shown that media discourse about energy is highly linked to national concerns.

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