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DOI:

[10.1016/j.erss.2020.101580](https://doi.org/10.1016/j.erss.2020.101580)

Document Version

Peer reviewed version

[Link to publication record in King's Research Portal](#)

Citation for published version (APA):

Bevan, L., Colley, T. P., & Workman, M. (2020). Climate change strategic narratives in the United Kingdom: Emergency, Extinction, Effectiveness. *Energy Research & Social Science*, 69(101580), Article 101580. <https://doi.org/10.1016/j.erss.2020.101580>

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Climate change strategic narratives in the United Kingdom: Emergency, Extinction, Effectiveness

Authors

Luke D. Bevan (corresponding author)

Department of Science, Technology, Engineering and Public Policy, University College London

4th Floor, Shropshire House, 11-20 Capper Street, London, WC1E 6JA, United Kingdom

l.bevan.17@ucl.ac.uk, lukebevan.github.io

Dr. Thomas Colley

Department of War Studies, Kings College London

Dr. Mark Workman

Grantham Institute for Climate Change, Imperial College London

Keywords: Narratives, Climate Change, Behaviour Change, Communication

Word count: 10,108

Abstract

Achieving policy, business and behaviour change necessary to mitigate climate change is one of the most formidable challenges of the twenty-first century. Increasingly, researchers have argued that communicating purposively designed stories – ‘strategic narratives’ – may be effective in building support for the policy measures necessary to limit anthropogenic warming to 2°C above pre-industrial levels. Recently, following the release of the IPCC’s 1.5°C special report, novel dynamics have emerged in climate strategic communication, with the emergence of new narrators, including youth climate strikers, child activist Greta Thunberg, and the insurgent group, Extinction Rebellion. Previous literature focuses mostly on narrative content and coherence, paying less attention to how a narrator’s credibility affects climate change strategic narratives’ persuasiveness. Adopting this broader view, this paper analyses five strategic narratives that became prominent in the United Kingdom following the IPCC report. Contrary to some previous calls for all-encompassing strategic narratives communicated top-down from governmental organisations, the most notable strategic narratives in our sample emerged from civil society. We therefore call for greater attention towards the interaction of different narrators in climate change strategic communication, to address whether a broader range of narrators constrains or enables coordinated action to mitigate climate change.

1 Introduction

1.1 Background

In 2018, a special report from the Intergovernmental Panel on Climate Change (IPCC) announced that achieving a pathway compatible with limiting anthropogenic warming to 1.5°C above pre-industrial averages would require a dramatic cut of 45% of greenhouse gas emissions by 2030 [1]. Thus, there may be only 12 years for humankind to undertake a profound shift in how natural resources are used and distributed in order to avoid dire consequences such as rising sea levels and widespread ecosystem damage. Upon publication of this report, an emerging narrative centred on this 12-year deadline and it spread rapidly, being picked up by media outlets and campaigning organisations alike.

However, this is not the only narrative to enter the public consciousness in recent times. New narrators have emerged from civil society driving calls for climate change action. These include the Extinction Rebellion (XR) group and their civil disobedience campaigns throughout the UK, and also the Youth *Climate Strikers*¹, a worldwide movement of school pupils striking for climate action. Policymakers often claim that they are acting on behalf of future generations, making the world safe for ‘our grandchildren’ for instance. With future generations now the narrators, rather than elites making claims on their behalf, there are novel storytelling dynamics in climate change communication that warrant further examination. The aim of this paper is to explore these new narratives and narrators, and what they suggest about the future of climate change strategic communication.

Climate change is a challenge with impacts on all levels of human organisation and acts over a broad, often inconceivable, timescale. Responses require the mobilisation of individuals and the coordination of complex social configurations. Despite the starkness of the threat, climate scientists and interest groups often struggle to communicate their research and roles effectively to a broad variety of publics [2,3]. Climate communication researchers have blamed these communication failures on cognitive biases, such as hyperbolic discounting, and other sociological problems, such as the difficulty overcoming ingrained social practices like regular air travel.

¹ Also known as *Fridays for Future* and *Youth for Climate*.

Facing this kaleidoscopic problem, the idea of using *strategic narratives* as a communication tool for persuading and coordinating large groups of disparate actors has emerged [4–7]. Narratives are fundamental to how humans interpret reality, providing a flexible vehicle for aiding understanding and persuasion.

1.2 Strategic Narratives

A *strategic narrative* is a story with a purpose [8]. They are used by actors to persuade and coordinate individuals and groups through making sense of events and themes with a plot and characters. They may also be used as an analytical tool by researchers seeking to understand political discourse, as in the case of their application in critical policy studies [9].

Strategic narratives are an increasingly popular tool across multiple domains. Their value in persuading audiences and coordinating actors in pursuit of collective efforts has been demonstrated in fields such as International Relations [10] and Conflict Studies [11]. Interest has also developed in the use of narratives in energy and climate change research, notably in this journal [12–15].

Bushell and collaborators [5,12,16] have argued for the widespread adoption of strategic narratives in climate science communication, as a way of mobilising actors and closing the ‘action gap’ between the current climate mitigation policy mix and that which is understood by the scientific community to be congruent with international targets of limiting anthropogenic global warming to 2°C above pre-industrial averages. Such narratives are also said to be capable of creating democratic ‘buy-in’, necessary to gain acceptance for and give meaning to ambitious climate policy [12].

1.3 Approach

In a 2017 paper in *Energy Research & Social Science*, Bushell et al. [12] identify and analyse a number of prominent narratives in use over recent decades and identify their shortcomings. They argue for the creation of new unifying narratives that can align the motivations of disparate publics. Their call to action is persuasive. However, given the entrance of several new narratives and narrators following the release of the IPCC’s 2018 Special report on global warming of 1.5°C, it requires some reappraisal.

We focus on strategic narratives that have emerged in political discourse in the UK, which is particularly significant given political events such as the emergence of the insurgent group, Extinction Rebellion and the UK parliament's declaration of a Climate Emergency in May 2019 [17]. In the history of climate change activism in the UK, Extinction Rebellion's civil disobedience campaign is unprecedented, as is British schoolchildren's widespread participation in the youth climate strikes. The British case is therefore ideal to examine how local and transnational strategic narratives overlap and interact, and how the emergence of narrators from within civil society changes climate change communication dynamics, if at all.

Twelve months following the IPCC report, the authors undertook a workshop to identify prominent narratives emergent in British political discourse following the IPCC report. Following this, the authors examined the original sources elucidating these narratives to identify key features and any overlaps. Collapsing these narratives into smaller categories where overlap was significant, we ended up identifying five distinct strategic narratives prominent in British media discourse since the IPCC report, which we name as follows:

- “12 Years to save the world” a narrative that emerged from the findings of the IPCC's most recent special report into global warming of 1.5°C.
- “The collapse is imminent” a fatalistic narrative that encourages protest, most widely deployed by a number of campaigning groups in the UK such as Extinction Rebellion.
- “Climate Emergency” a softer version of the two above narratives, as adopted by the UK government in 2019.
- “You're destroying our future” a narrative that has emerged alongside the school climate strike movement.
- “Our plastic straws are choking the planet”- a narrative emphasising the damage that some aspects of our consumer society do to the natural world.

We will consider these emergent narratives and revisit Bushell et al's [12] analysis to consider what aspects of these narratives are novel, and whether they promise greater persuasive power than previous attempts. However, we move beyond Bushell et al.'s analysis by paying closer attention to the role of narrators in shaping the effectiveness of strategic narratives. In contrast, our approach is closer to what Moezzi et al. [14] describe as a ‘storytelling’ approach, paying attention to who narrates and how, not just to narrative content and form. In this way we aim to bring up

to date the growing work on strategic narratives, applying a broader analytical lens to recent shifts in climate change strategic communication.

Our decision to focus more on the narrator than previous strategic narrative research reflects a shift in focus in political communication towards the authenticity of communicators rather than just the content or veracity of what they say. The credibility of the narrator has been recognised since ancient times as crucial to persuasive communication [18]. However, renewed attention to this has emerged with the evolution of populism in global politics, which has brought to prominence a variety of leaders who appear to consciously base their appeal on being seen to say what they think spontaneously, even if this contradicts established fact, or even their previous statements. Rejecting stage managed statements, soundbites and catchphrases, such communication bases its power more on the authenticity of the narrator rather than the coherence or veracity of what they say. We contend that analysis of climate change strategic narratives should be updated to consider narrator authenticity in more depth.

1.4 Aims

The purpose of this paper is not to restate the case for strategic narratives as a communication or coordination tool in climate change. This has been performed ably elsewhere. Neither is its aim to provide a causal explanation of the effectiveness of a given strategic narrative that could aid prediction of strategic narratives' future effectiveness. There is an insufficient research base to back up such assertions in the climate change literature, and in any case, the communication environment is sufficiently complex to confound future prediction. Rather, our aim is to provide a nuanced exploration of how a new range of storytellers is narrating climate change in the British socio-political context, identify which aspects of these communication dynamics are novel, and provide an initial, provisional evaluation of their effectiveness. With climate change activism in the United Kingdom apparently growing in scope and intensity, the need for preliminary analysis of emergent trends is arguably urgent. Such analysis may inform how strategic narratives – and their narrators – may be best employed to build support from publics towards climate action consistent with widely accepted international targets.

1.5 Structure

The paper begins with a short interdisciplinary synthesis of the literature of *what makes strategic narratives effective* and *what types of narrative have the most effective persuasive and coordinative power*. We deliberately draw on a wide range of interdisciplinary literature, for two reasons. *First*, the strategic narrative literature is highly interdisciplinary, and we contend that adopting this approach provides more nuanced narrative analysis. *Second*, while the literature is broad, in climate change communication we still lack a nuanced sociological understanding of the emergence of strategic narratives from within civil society and social movements such as XR. To capture these nuances, we employ a series of theoretical lenses to analyse each narrative. We employ Ringsmose and Borgesen’s [19] theory of strategic narrative persuasion to assess how effectively each strategic narrative may coordinate diverse audiences. We employ the Narrative Policy Framework as a means to analyse the narrative’s structure and content. Finally, we employ Greimas’ Actantial narrative schema as it provides a more nuanced range of characters than previous studies of climate change narratives. Combining these enables us to provide a deeper and broader analysis of the new narratives. In Section 0, we then critically reflect on emergent trends in strategic narration in the UK context and identify gaps in the evidence base that require further research.

2 What makes effective strategic narratives?

2.1 A working definition of Strategic Narratives

What is a narrative? This seems like a question with an intuitive answer – a narrative is a story. Most conventional dictionary definitions of narratives or stories say that they are accounts of events, real or imaginary. Understanding what elements constitute a narrative is important, because narratives with more of these elements may be more persuasive.

Definitions of narrative vary largely by discipline. Miskimmon et al. [10] define three key components of *narrativity*² to be *action*, *temporality* and *causality*. In this context, ‘*action*’ refers to the fact that a ‘process of doing’ must occur – narratives must contain events, driven by actors;

² The *thing* that makes something a narrative - the ‘narrative-hood’ of a thing [85]

'temporality' means that the narrative must have a temporal logic³ within it; time must be represented. *Causality* requires that the events in the temporal frame do not occur spontaneously and unlinked. For instance, rising carbon dioxide levels and climbing temperatures do not provide much by the way of a climate change narrative unless linked to show how one causes the other. The authors make the distinction between events having *narrativity* and constituting *a narrative* by the ability of the events to be *interpreted* by an audience. This potential for variable interpretation or subjectivity differentiates them from factual lists of events. *Temporality* and *causality* give direction and meaning to events [20]. Henceforth this paper will use a general definition of a narrative, adapted from the above discussion: *'a narrative pertains to: actors, characters and events, as well as the relations between them that have temporality, causality and interpretivity.'*

The exact definition of a *strategic narrative* varies similarly, reflecting the diverse fields employing it since its emergence in the mid-2000s [21]. Strategic narratives are often defined as a tool of influence that actors can use in settings such as international relations [10,22]. Business authors have emphasised their utility as a managerial tool to give an organisation a sense of harmonised purpose [23].

Tackling climate change requires coordination across many groups, as the success of carbon mitigation is dependent on the sum of actions from diverse stakeholders. A framework is warranted which helps individual actors understand their role in this effort without relying on explicit direction from centralised authorities [24]. Public narratives can allow groups of individuals to coordinate action effectively as they can give a shared sense of meaning to events. Simpson [25] emphasises this coordinative potential of a strategic narrative in joining up different rungs of an organisation in a conflict setting; strategic narratives can facilitate a coherence in meaning of policy, operational and strategic actions. Simpson defines a strategic narrative by the way that *action is given meaning* and says that it is an *"explanation for strategy in narrative form"* (pp. 179–182).

From the multitude of definitions two key elements appear consistently: (a) the use of strategic narratives as a persuasive tool and (b) the use of strategic narratives as a coordinative tool. For this reason, in this paper, *Strategic Narrative* refers to *a narrative that has been deliberately constructed to have a coordinative and/or persuasive effect.*

³ The way that time is represented over the course of the narrative.

Narratives also differ from other elements of strategic discourse. For example, framing: narratives may go further than frames or combine and allow multiple frames to form a cohesive whole [26]. Frames do not necessarily possess temporality; narratives do [10]. A narrative can provide a temporal and causal superstructure into which other frames can be readily organised.

2.2 Narrative process and Structure

Strategic narratives are communicated in a cyclical three-stage process of formation, projection and reception [10]. First, an actor deliberately formulates a strategic narrative to achieve a given aim. Ideally this would be based on an understanding of their target audiences and those most likely to influence them [16]; this narrative is then projected using some variety of media, be it polemic, political speech or podcast. Finally, it is received by an audience who interpret it based on their understanding of the world. Ideally, audience feedback would then feed back into subsequent narrative formation, so that it can be adapted over time to changing circumstances and to resonate more strongly with audiences [12,16,27].

2.3 The Persuasive Power of Narrative

Homo Narrans

One of the influential early theories that relates the concept of narratives to communication is the *narrative paradigm*, developed in the late 1970s by Walter Fisher. It makes the striking claim that narrative is the most natural form of communication [28], that humans understand the world through narratives, and that human communication is not simply situational (descriptive of situations), but also historical (communication must lie within a temporal context). Hence, humankind is labelled ‘homo narrans’. In creating this theory, Fisher attempts to unite two strands of rhetorical analysis: the *argumentative* and the *literary* [29].

It stands in opposition to traditional models of persuasion that insist all human rhetoric is essentially argumentative in nature [30]. Fisher argues that narratives constitute their own rationality that goes beyond logic [31]. The paradigm suggests that audiences evaluate the ‘narrative rationality’ of a communication to evaluate credibility [32], based on two components: ‘narrative coherence’ and ‘narrative fidelity’.

Narrative coherence (or *Narrative probability*) refers to the strength of a narrative's internal structures [31], notably whether they are free of inconsistencies and contradictions [33].

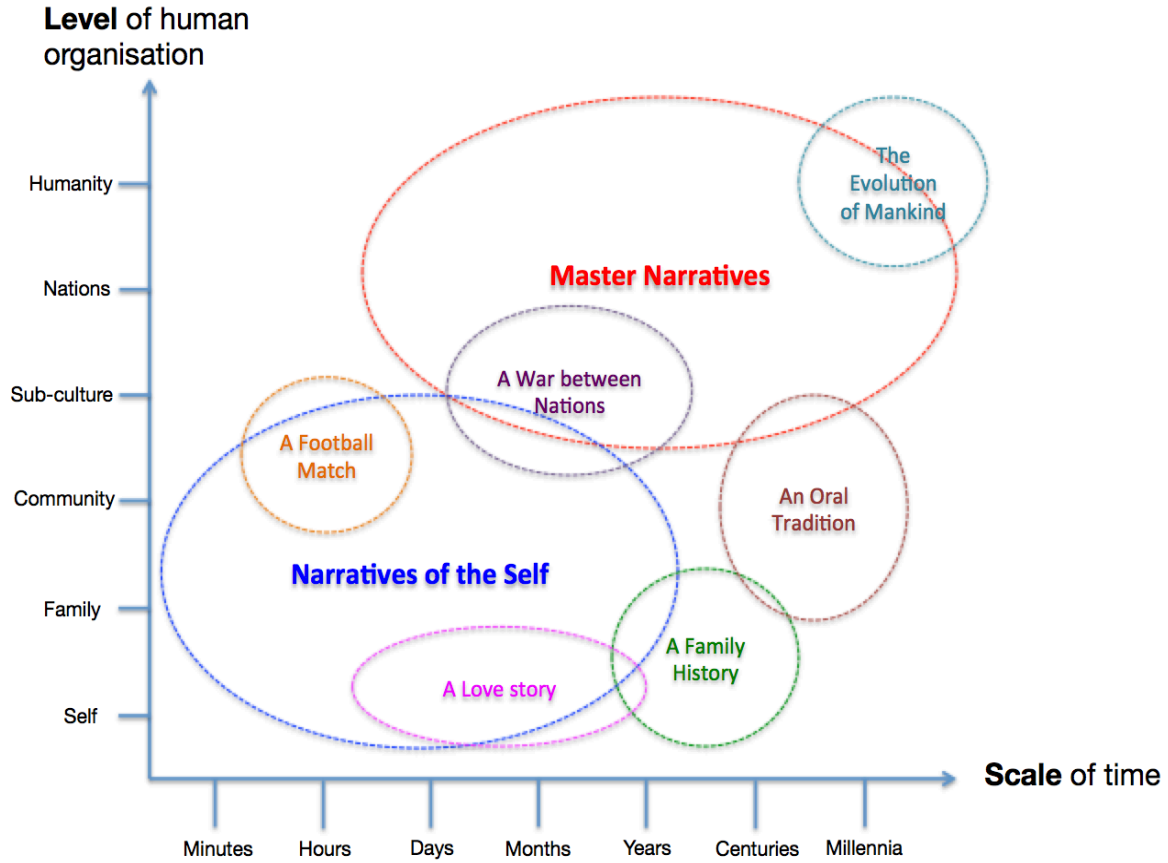
Narrative fidelity relates more to the substantive content of the story [31]. This looks at two things: the logical reasoning of the narrative and the appeal that the narrative has to pre-existing values of the audience [33].

2.4 The organisational power of narrative

Organisational strategic narratives can help give meaning and purpose to organisations and can explain to others what the organisation does [8]. By creating shared narratives, a community or an organisation can provide a framework that enables individuals to understand how their actions contribute to a common cause. Strategic narratives are argued to be effective in communicating broad organisational purposes on scales all the way up to a nation as complex as the United States [34]. For these reasons the business community has become interested in using strategic narratives for organisational management and strategy development [8,23,35].

Strategic narratives can allow individuals to understand how their life narratives fit into a greater whole. Figure 1 illustrates how overlapping narratives can organise smaller events into larger stories about cultures and nations. These can often make individual actions seem far more significant. A rebel can portray their individual struggle against discrimination and oppression as part of a universal struggle between freedom and tyranny. The individual decision to recycle can be situated within a bigger story or 'master narrative' about preserving the future of humanity. This ladder between individual narratives and master narratives is an integral aspect of climate change strategic communication, as it is a way of linking individual behaviours to a wider cause. Doing this is especially important, for as Bushell et al. [5] showed, a key issue with climate change is overcoming the sense that one person's action is too small to make a difference.

Figure 1: The different scales and levels of narratives.



2.5 Our Theoretical Framework

Ringsmose & Borgeesen's Framework

As mentioned earlier, our analytical framework applies three different theoretical lenses to assess each strategic narrative. The first is a theory of narrative persuasiveness from conflict studies, employed by Ringsmose & Borgeesen [19] to examine the link between the use of strong strategic narratives and public opinion on the war in Afghanistan. We employ the framework as it highlights important elements narratives must contain to secure support for political action. They argue that a strong strategic narrative will be imbued with four essential qualities [19]:

- **Clarity of Purpose:** narratives with a clear answer to the “*why*” of an action are said to be better.
- **Prospect for Success:** narratives must describe a successful resolution to a problem or challenge.
- **Consistency:** the narratives told by the communicator must be consistent with each other.
- **Absence of strong competing narratives:** the narrative would ideally not be contested.

Each of these is pertinent to climate change strategic narratives. To encourage behaviour change, they ideally would explain why people should change their behaviour, how this will contribute to success. Contradiction and inconsistency will reduce their credibility. The *absence of strong competing narratives* is slightly different, since it is a characteristic of the communication environment, not a narrative itself, but it remains important. It is harder to persuade citizens to alter their behaviour to mitigate climate change when a range of international actors and lobbyists are actively trying to promote anthropogenic climate change as a hoax. The presence of competing narratives, if anything, reminds the analyst that there is no objective measure of narrative persuasiveness outside the research laboratory – narrative persuasiveness will be relative to other stories circulating in public discourse. This is the context in which all strategic narratives on climate change should be assessed.

The Narrative Policy Framework

We employ the Narrative Policy Framework (NPF) as our second theoretical lens for three reasons. First, unlike Ringsmose and Borgesen’s model, it focuses on the structural content of narrative text itself. This matters because narrative is a unique unit of discourse with different persuasive properties to other forms of discourse, linked to its structural features [36]. Second, the framework was explicitly designed to examine the place of narratives in the policy process, with its structural framework employable in both positivist and interpretive analysis. Using it therefore illustrates useful avenues for future research, following our provisional examination. Thirdly, the framework is useful because it focuses not just on narrative structure but on *trust* in the narrator. It is therefore particularly useful for our aim of exploring how narrators from civil society shape climate change strategic communication dynamics.

The NPF claims that policy narratives may have one or more of the following elements⁴ that define the *form* of the narrative [9,37]:

- **Setting**– this comprises the informational space in which the narrative resides.
- **Characters**– the NPF defines these as *heroes*, *victims* and *villains*, but a far greater range of characters is possible.

⁴ This may be problematic as such a definition, with a minimal number of qualifying elements, may be overly broad as to include many aspects of discourse that would not normally be considered narrative.

- **Plot**– the relationships between characters and settings, more commonly associated with how the actions of a narrative’s characters play out over time.
- **Moral**– refers to the overall point the narrative is designed to make. In policy narratives this is usually the policy solution that is advocated.

The NPF posits that narratives act on 3 levels of human organisation, *micro* (relating to individuals), *meso* (relating to groups of people) and *macro* (relating to organisations and societies) [9,37]. These bear similarity to Somers’ distinction between ontological, public and meta-narratives [38]. Scholars outlining the NPF [9] point to the *meso* scale of narratives as acting strategically in its ability to create coalitions of individuals. They point to work by McBeth et al. [39], that shows that the applications of narratives imbued with values, in a strategic manner, is able to expand the scope of a conflict by relating the conflict to wider issues and bringing others to one’s aide. For example, one may attempt to garner support for one’s side of an environmental conflict (e.g. whether fracking should be permitted in an area) by relating the conflict to wider values issues (e.g. stewardship of the landscape), by using a narrative.

The NPF proposes four mechanisms by which narratives can persuade individuals [9]:

- **Narrative “Breach”:** Stories that depart from the norm to the greatest degree are said to be more compelling. A greater deviation from the status quo creates more drama, making a narrative more arresting. A narrative gaining more attention is more likely to persuade than one that fails to generate interest.
- **Narrative Transportation:** The more an audience is immersed in the vividness and depth of a story, the more likely they are to be persuaded by subtexts within it. In popular imagination, this is akin to ‘losing oneself in a good book’. In this state we are liable to be persuaded not because we are evaluating the arguments being presented to us, but because of subtexts contained within the immersive story. This is a important way narrative is thought to persuade differently from argument. [36,40]
- **Narrative Congruence:** If a narrative corresponds with an individual’s conception of the world, then the narrative is more persuasive. This is often described as ‘resonance’ and is similar to Fisher’s concept of narrative fidelity [30].
- **Narrator Trust:** The NPF points to a number of qualities that a messenger may have that will improve the chance that people will be persuaded by their message, such as likability, an ideology congruent with the audience, and credibility. This is similar to the traditional

definition of the Aristotelian rhetorical element *‘ethos’* – the credibility of the narrator to make an argument [41].

Greimas’s Actantial Schema

Our third theoretical lens is Greimas’s Actantial Schema [42]. We deem this necessary because while the NPF examines the characters in narratives, it simplifies key roles to heroes, victims and villains. We contend that more nuance is needed. These roles are undoubtedly pertinent in climate change strategic narratives, which are replete with Heroes – ordinary people, climate activists, charismatic cleantech entrepreneurs; Victims – Mother Nature, polar bears, indigenous communities; and Villains – fossil fuel companies, complicit politicians. However, debates about what roles different actors should play in climate action are more complex than this. Should citizens lead the process, aided by governments? Should industry lead, and citizens follow? Some governments are investing heavily in carbon reducing technology, producing vast quantities of fossil fuels, yet they may also be victims of climate change. We argue that greater complexity in character analysis would be helpful. To that end, Greimas’ actantial schema considers a set of six actants in 3 pairs: which places forces in a narrative in oppositional roles [43]

Subject: That seeks the object;	Object: The item of desire of the subject
Helper: A force that helps the subject reach the object;	Opponent: A hindrance to the subject
Sender: beckons the subject forth;	Receiver: benefits from the action

To exemplify this, Table 1 below indicates the different characters in a typical pro-climate change mitigation narrative.

Table 1: Example of Greimas’ Actantial Schema used to map character in a hypothetical situation, modelled very loosely around the Dakota Access Pipeline protests of 2016

Subject: The selfless environmental campaigner	Object: Stopping an oil pipeline being built
Helper: Indigenous rights groups	Opponent: Major fossil fuel companies
Sender: The sacred and ancient duty of water protection	Receiver: Humanity, Cultural sites of importance

As our analysis will show, altering the characters' roles and positions in the narrative generates different implications for who should act to mitigate climate change and how.

2.6 Summary

Narratives can be analysed in terms of their content, by looking at their qualities such as the sense of drama they create (breach) and the characters they contain. However, the narrative itself is just one aspect of the narrative process of narration, projection and reception [10]. To focus only narrowly on narrative content without paying attention to the process of narration (the narrator) and the process of reception (the audience) is to misunderstand the power and complexity of narrative communication. It risks reducing political communication to a technical competition to construct the most compelling story, when in fact it is a more holistic endeavour. A technically compelling narrative may not even be noticed if communicated at a time when something more interesting grabs audience attention. Incoherent narration can seem compelling if the speaker has a reputation for authenticity. Audiences will likely reject stories that contradict their existing worldviews, however artfully constructed. Analysis of climate change strategic narratives must pay attention to these nuances.

Despite the breadth of literature from a wide range of disciplines, there is currently a lack of sociological and social scientific attention to recent trends such as the emergence of XR and other groups. In the ensuing analysis we will utilise Ringsmose and Borgesen's framework, the Narrative Policy Framework, and Greimas' actantial schema, incorporating additional commentary on the role of narrators and audiences in order to pay better attention to the contextual dynamics of narrative creation, projection and reception.

3 Analysis: Emergent Narratives

3.1 Summary of the Narratives

In this section we briefly detail a number of emergent climate narratives, that are prominent in, though not limited to the UK context. Deploying concepts from the previous section, we suggest how these narratives may face challenges, and we identify opportunities for engaging with a wide variety of audiences.

Table 2, overleaf, provides a comparison of the five narratives identified, employing the Narrative Policy Framework in its analysis.

Table 2: Table summarising key elements of the narratives identified by this paper with analysis of potential strengths and weaknesses utilising NPF, Greimas' framework and Ringsmose & Borgesen's framework

		12 Years to Save the World	The Collapse is Imminent	You're destroying our future	Climate Emergency	Our plastic straws are choking the Planet
Summary of narrative		Scientists have found out that time is running out and the world has only 12 years to respond to the climate crisis. Humanity must do so in an unprecedented way.	The climate crisis is such that some kind of societal collapse is near inevitable. Due to the inaction of negligent or complacent politicians the social contract has broken down and it is incumbent upon individuals to engage in non-violent civil disobedience to shock society into urgent action..	The political stasis around climate change means that we cannot rely on politicians to create the change necessary. With collective action, even the politically weak can make a difference and secure a future for generations to come.	The climate crisis is sufficiently severe that it warrants declaring a climate emergency. This should occur at different levels of government as climate requires action at all levels, from the hyper-local to the global.	The manifestations of our consumer society can be seen all around us. Through responsible consumption we can rid the natural world of these pollutants— one pollutant at a time.
Narrative Context		The release of the IPCC's Special report on Global Warming of 1.5°C.	Extinction Rebellion protests across the UK.	Schools Climate Strike	The UK parliament voting to declare a climate emergency.	Increasing awareness of a plethora of issues such as ocean plastics.
Boundary of Narrative		Transnational though prominent in UK media.	UK-focussed with some International branches.	Transnational in origin, manifested in the UK.	UK-government focussed though transnational in origin.	Prominent in UK though a recognised global issue.
Notable Narrators		Climate Scientists	Extinction Rebellion	Greta Thunberg, School Strikers	UK Government/ Opposition	Various (notably David Attenborough)
Values		Vague: Urgency	Truth	Intergenerational Justice	Vague	Avoidance of harm
Narrative Actants (Greimas)	Subject (Hero)	Unclear	Everyday citizens	The small people	Multiple levels of government	The conscious consumer
	Object	Unclear	Treating climate change with the urgency it demands.	Urgent action to mitigate climate change.	Unclear and deliberately vague.	Reducing the impacts of our consumer culture.
	Helper	Unclear	The virtues of truth and the weight of scientific evidence.	Supportive parents and other members of civil society.	Unclear	Enlightened businesses to help consumers reduce plastic consumption.
	Opponent (Villain)	Unclear	Complicit political elites, special interests.	Static governments	Flexible: this may be political opponents or other governments	Businesses that use plastic excessively and fail to provide alternatives, Individuals who recklessly dispose of single use plastics
	Sender	Climate Scientists	The weight of scientific evidence.	Scientific evidence and the visible harm being done to the planet.	Unclear – government unlikely to acknowledge that declared emergency to accede to XR demands.	The revealed impacts (e.g. images of ocean plastics waste)
	Receiver (Victim)	Planetary systems	Future generations	Young People, Future generations	Unclear	Planetary systems

Narrative Policy Framework Dimensions	Breach	(-) Similar narratives used in the past, so may not be surprising (+) Deadline is urgent and surprising.	(+) Concept of inevitability of collapse is far starker than previous narratives.	(+) Children striking is an unusual development.	(-) Conveys emergency but lacks some elements of urgency associated with ore fleshed out narratives such as the '12 years to save the world'.	(+) Driven by dramatic, unforeseen images of damage to animals by plastics on individual and mass scale.
	Transportation	(-) Lack of strong characters or sense or what the drama will unfold at 12-year period.	(+) Potential for engaging stories of individual protesters and drama of protests in general.	(+) Emotive and local stories of community action can engage audiences.	(-) Lacking detail and supporting stories that might transport audiences.	(+) Documentaries have provided engaging stories of suffering species and ecosystems.
	Congruence (Fidelity and Coherence)	(-) Confused temporal logic of narrative. (+) Congruent with other narratives conveying urgency but (-) undermined by poor record of apocalyptic narratives.	(+) Congruence between claims of urgency and behaviour but (-) undermined by history of apocalyptic narratives being disproven.	(+) Congruence with cultural ideas of looking after the next generation and other narratives urging emergency action.	(+) Notion of emergency congruent with the IPCC, striking children and Extinction Rebellion, but (-) incongruent with recent government policy.	(+) Coherent with idea of general human planetary damage but (-) less obviously coherent with climate change mitigation agenda.
	Narrator Trust	(-) Confusion over deadline's correspondence with the science may undermine trust	(+) Diverse group of narrators used to convey message but (-) some audiences will dismiss rebel behaviour.	(+) Child narrators perceived to have unimpeachable motives	(-) Low trust in government, scepticism that this is an empty slogan and action may not follow.	(+) Narrator David Attenborough is highly trusted in UK context
Ringmose & Borgesen's Categories	Clarity of purpose	(+) Clear reason provided for urgent policy action, but (-) unlikely to reflect individual experiences.	(+) Clear call to specific action, communicated through words and deeds, but (-) call for rebellion only likely to persuade specific audiences.	(+) Saving the world for next generation a commonly understood idea but (-) specific behaviour changes need to be articulated.	(-) Reason for the emergency clearly explained but significant say-do gap between promises and action.	(+) Clear behaviour changes advocated and doable at individual level.
	Prospect of Success	(-) Narrative is nonprescriptive and vague. May cause pessimism given scale of action needed and timescale.	(+) Usually accompanied with clear political demands but (-) risk of delegitimising cause depending on how civil disobedience proceeds.	(+) Worldwide scale increases prospect of success but (-) narrative includes scepticism about whether elites take idea seriously.	(+) Expresses optimism that concerned countries may act but (-) pessimistic that other countries may follow.	(+) Behaviour changes called for are doable on mass scale. (-) Significant effect on overall problem likely limited.
	Competing Narratives	(-) Easy to form counter narrative by disputing cliff-like nature of deadline, especially as moment of catastrophe will be unlikely to be experienced directly.	(-) Easy to demonise protesters as disruptive, extreme activists. Many audiences may not see that action requires rebellion yet.	(+) Relative difficulty in forming counternarratives against children (-) Opponents may try to claim that children are naïve, misled or manipulated.	(-) Claims of emergency directly contradicted by elements of government policy.	(-) Can be co-opted into a consumer choice narrative by special interests which takes emphasis off collective action.

3.2 Narrative 1: “12 Years to save the world”

“The UN Intergovernmental Panel on Climate Change (IPCC) makes it clear we must act to limit global warming to 1.5°C or we risk catastrophic climate change. The IPCC also stated we have less than 12 years to do this. This is a clarion call for our movement and together we must rise to this challenge with renewed determination and energy.” - Friends of the Earth [44]

In the fanfare of the release of the IPCC’s Special Report on the Impacts of Global Warming of 1.5 degrees [1], a new narrative emerged from its findings: that to ‘save the world’, decarbonisation efforts must be dramatically accelerated within 12 years. This did not literally reflect the report’s actual findings. In fact it stated that the carbon budget that gives a chance of 66% of keeping anthropogenic warming below 1.5°C above pre-industrial levels (420 GtCO_{2e}) will be expended within 10 years (by 2030), assuming current emissions rates continue (42 GtCO_{2e}/year). Secondly, a carbon budget which gives a 50% chance of keeping warming below 1.5°C (580GtCO_{2e}) will be expended within 14 years. The half-way point between these two numbers gives 12 years. Hence ‘12 years to save the world’.

This narrative manifests this estimated expiry date of the 1.5°C carbon budget as a deadline, making climate action a race against the clock. The narrative was described in the Harvard Business Review as “The Story of Sustainability in 2018” [45] and it was seized upon by a number of media organisations [46–49] and campaigning groups [44,50]. This narrative could also be seen to be an updating or transmutation of the “End of the World and Alarmism” narrative identified by Bushell et al [12]. The *12 years* narrative informs and reinforces the subsequent narratives identified here – the IPCC provided an official, scientifically-backed statement of the urgency of action that other narrators have used to inform their own strategic narratives.

In terms of narrative elements, this account is sparse. It has very weak characters: the IPCC or more nebulously ‘climate scientists’ are the key characters here, providing a warning and a deadline to humanity. However, the protagonist in terms of action is unclear. Likewise, the prescription for action and a clear possibility for success is ambiguous.

The key feature of the narrative is the dominance of the temporal logic. However, this is where one of the key issues with the narrative can be found. Much ink has been spilt in media commentary as to whether this ‘12 years to change the world’ implies a cliff-edge situation. It has even prompted a limited amount of media commentary on the appropriate deadline to place on the period available for global climate salvation [51,52].

Considering narrative congruence (from the NPF), we can see that a 12-year cliff edge past which climate consequences are dire/and or irredeemable, is unlikely to be consistent with people’s everyday experience of the world. Read as a document targeted at policymakers, the IPCC document may be more effective in catalysing policy change, and it is potentially useful in this respect. To public audiences, however, the deadline is likely to seem artificial and will likely fail to motivate people adequately. It may even demotivate if people perceive that that is too little time to initiate meaningful change. Indeed a 12-year deadline is incompatible with the findings of the original report: exceeding the carbon budget within this timeframe does not make future decarbonisation efforts ineffective. Moreover, if the target is reached, further work is required after 2030 to complete decarbonisation and adapt to the climate change to which the earth is already locked in.

Deadline or ‘do-or-die’ narratives have an inglorious past- notable examples include the expectations around the 1992 Rio and 2009 Copenhagen climate summits. Setting specific deadlines is fraught with risk to credibility if the events that will take place at that deadline fail to materialise, be it religious groups stating a given date as the end of the world, or the Millennium Bug. Political promises to end military interventions or reduce immigration targets or unemployment by a certain date, undermine credibility significantly when the achievement cannot be observed. Twelve years’ time may well see feedback loops that produce irreversible warming, but the plot of the story’s planetary effects will mostly likely not match how humans experience the world. And when extreme weather events occur, there will always be persuasive counternarratives that they represent natural variations that will sow doubt. The strategic narrator then has to start again on the first day of Year 13 and explain why the world hasn’t visibly ended.

In summary the narrative lacks strong characters, a prospect for success and clarity of purpose. The logic of the deadline is at odds with the nature of the problem as climate change is a continuous issue (Fisher’s narrative coherence). Its abstract deadline may temporarily shake

policymakers concerned with short electoral cycles out of complacency, but for public audiences, it is unlikely to have a basis in people's experience of the world.

Drawing on the NPF therefore, the narrative lacks *congruence* and the ability to *transport* audiences. Given that it also strays from the source material – the 66% probability of breaching a 1.5°C carbon budget at current emissions rates by 2030 – it raises the question of *narrator trust* – in other words, how credible and important the IPCC is as a communicator. This is further examined in Section 4.

3.3 Narrative 2: “The Collapse is Imminent”

“This is our darkest hour. Humanity finds itself embroiled in an event unprecedented in its history, one which, unless immediately addressed, will catapult us further into the destruction of all we hold dear: this nation, its peoples, our ecosystems and the future generations to come. [...] The ecological crises that are impacting on this nation... can no longer be ignored, denied or go unanswered by any beings of sound rational mind, ethical conscience, moral concern or spiritual belief. In accordance with these values, the virtues of truth and the weight of scientific evidence, we declare it our duty to act on behalf of the security and well-being of our children, our communities and the future of the planet itself. We... declare ourselves in rebellion against our government and the corrupt, inept institutions that threaten our future. The wilful complicity displayed by our government has shattered meaningful democracy and cast aside the common interest in favour of short-term gain and private profit. When the government and the law fail to provide any assurance of adequate protection of and security for its people's well being and the nation's future, it becomes the right of citizens to seek redress [...] We hereby declare the bonds of the social contract to be null and void [...]” – Extinction Rebellion [53]

This narrative finds a number of expressions, but generally centres on the idea that some sort of catastrophic socio-environmental collapse is now inevitable. This state of affairs is the fault of negligent, myopic or denialist elites. An argument grounded in social contract theory; the group contends that state failure to act to mitigate anthropogenic climate change is a breach of the social contract binding the individual to the state. The citizen sacrifices some of their liberty in exchange for the state providing security, but the state is failing to secure people from the harmful effects

of climate change. Consequently, insurrection is a just and necessary response to protect the planet, the nation, future generations and ecosystems.⁵

The narrative was heavily influenced by a working paper by Bendell [54], which gained reach far outside of academic domains. Writing in an informal style, Bendell [54] argued that a near-term collapse is inevitable due to the non-linearity of climate feedbacks – whereby small inputs can have large effects by triggering subsequent feedback loops. In the face of this collapse Bendell described existing climate adaptation studies to be inadequate. Instead he coined ‘deep adaptation’ as an agenda that seeks to understand how to preserve human values in the face of the inevitable collapse.

The Extinction Rebellion (XR) movement is perhaps the most prominent messenger of this narrative– a quasi-decentralised environmental campaign group that arose out of pre-existing networks of environmental campaigners. They staged a series of high-profile protests and acts of mass civil disobedience, culminating in a sprawling group protests across London in which a number of key intersections were blocked to traffic by protestors and some light rail trains were interrupted in the financial district. After poorly organised attempts in autumn 2018 to block bridges in London attracted minimal attention,⁶ the Spring 2019 protests were far better coordinated and garnered a high volume of attention and interest.

The narrative has clear prescriptions for actions in the face of the threat, though its narrators could be criticised for relying heavily on a ‘doom and gloom’ message– a style of message which evidence suggests can be disempowering and likely to cause some audiences to disengage with the subject matter [55,56].

The urgency of XR’s strategic narrative is reinforced by the IPCC’s *12 years to save the world* narrative, however, XR’s narrative is better able to achieve narrative breach, transportation and – among some audiences (but not others) – narrator trust. This is not because of the narrative’s content – it is similar to apocalyptic narratives that have come before. Rather it is because of the actions of the group itself. That people are (now) willing to break the law in order to secure climate change

⁵ For an Introduction to social contract theory, see Wolff [86].

⁶ See <https://www.theguardian.com/world/video/2018/nov/22/we-cant-get-arrested-quick-enough-life-inside-extinction-rebellion-video>, accessed 15 August 2019.

policy change is a significant narrative breach. It conveys a real-world urgency beyond that which is achievable with artful narrative construction. It generates dramatic stories that can transport individuals in a way that an abstract policy document cannot. The group derives some credibility as narrators by acting on their convictions, and legitimacy by grounding its narrative in a centuries-old justification of rebellion against political authority.

However, this credibility – and the narrator trust derived from it, depends on the audience. While there is limited target audience analysis of XR’s communication to date, telling insights can be taken from the group’s FAQ on their website [57]. Here the group imagines criticisms they might face and presents rhetorical responses. The site creators feel compelled to provide responses to questions they anticipate, including: ‘Aren’t you just a group of middle-class left-wing activists?’ ‘Aren’t you just a bunch of law-breaking anarchists or economic terrorists or eco-fascists?’ ‘Are you professional lifestyle activists?’ The group’s perceived need to address these points highlights both the main target audiences to which they appeal – for audiences that are typically not engaged in political activism, middle classes on the liberal-left. However, they are also telling in highlighting how opponents may counter their narrative through attacking their character as extremists who choose activism rather than a ‘real job’, or who reject authority and the existing political system. By implication, those whose personality traits or political beliefs predispose them to supporting authority and traditional societal roles will be less likely to find the group trustworthy strategic narrators.

In most circumstances broader populations are reluctant to rebel and authorities routinely succeed in labelling dissidents as a disruptive and deviant minority [58]. *Rebel* strategic narratives often therefore lack resonance unless circumstances are especially favourable. In Britain, however, 2019 saw freak weather conditions, with often the coldest month of the year – February - instead seeing summery temperatures. Subsequent months saw a growing array of record-breaking weather events. Anomalies or not, populations are experiencing these phenomena and recognition of the importance of mitigating climate change is growing. XR’s strategic narrative thus possesses greater resonance at this particular point, making it more persuasive than apocalyptic narratives that have come before. It also provides an important reminder that the power of a strategic narrative derives from its relationship with real world action, not words alone.

Narrative 4 will also consider the UK government’s partial acquiescence to some aspects of the narrative in its declaration of a climate emergency.

3.4 Narrative 3: “You’re Destroying our future”

“A lot of people say that Sweden is a small country, that it doesn’t matter what we do. But I think that if a few girls can get headlines all over the world just by not going to school for a few weeks, imagine what we could do together if we wanted to. Every single person counts. Just like every single emission counts. Every single kilo. Everything counts. So please, treat the climate crisis like the acute crisis it is and give us a future. Our lives are in your hands” – Greta Thunberg [59]

The “School Strike for Climate” movement is an ongoing international movement of students protesting governmental inaction by not attending school on certain days. The movement began with Swedish schoolgirl Greta Thunberg in September 2018, inspired by American student activists deliberately missing lessons to advocate for gun reform. The movement spread to the UK with notable walkouts of British schools occurring in February, March and May of 2019 [60,61].

This narrative emphasises the role of ‘small’ people in achieving large aims – perhaps fitting into somewhat of a David Vs. Goliath archetype. The narrators are the climate strikers themselves and this is one of its key strengths. The climate strikers – children- are readily framed as innocent, authentic voices, being passively harmed by states’ refusals to act with sufficient urgency. Their credibility comes not from nuanced political knowledge – children are routinely portrayed as naïve and idealistic by adults. However, they are particularly challenging narrators for governments in this context because they directly challenge one of the most common tropes political elites use to justify policy: that they are preserving the world for ‘our children and grandchildren’. That those children and grandchildren appear to be spontaneously challenging this imbues them with considerable power as narrators.

Perhaps the most powerful aspect of the narrative derives from the distributed nature of the climate strikes. The narrative is embedded and can be tailored to a wide range of community contexts, fostering a global imagined community of children concerned about their future. Local narrators are empowered to produce their own authentic climate stories. With the difficulty of responding to the children themselves, opponents have instead sought to deny their agency and attacked their teachers, stereotyping them as possessing left wing biases and teaching in an overly

politically correct manner.⁷ The material support Greta Thunberg needed to sail on a racing yacht to New York to address the US Congress and the UN in September 2019 provided an opportunity to opponents to attack her credibility by suggesting she is being manipulated by elite backers rather than being an authentic voice. The British government took a more moderate line, suggesting the students were missing valuable lesson time in which they could be training to be the climate scientists of the future and help solve the problem [61].

3.5 Narrative 4: “Climate Emergency”

“That this House declares an environment and climate emergency following the finding of the Inter-governmental Panel on Climate Change that to avoid a more than 1.5°C rise in global warming, global emissions would need to fall by around 45 per cent from 2010 levels by 2030, reaching net zero by around 2050; recognises the devastating impact that volatile and extreme weather will have on UK food production, water availability, public health and through flooding and wildfire damage; notes that the UK is currently missing almost all of its biodiversity targets, with an alarming trend in species decline, and that cuts of 50 per cent to the funding of Natural England are counterproductive to tackling those problems; calls on the Government to increase the ambition of the UK’s climate change targets under the Climate Change Act 2008 to achieve net zero emissions before 2050, to increase support for and set ambitious, short-term targets for the roll-out of renewable and low carbon energy and transport, and to move swiftly to capture economic opportunities and green jobs in the low carbon economy while managing risks for workers and communities currently reliant on carbon intensive sectors; and further calls on the Government to lay before the House within the next six months urgent proposals to restore the UK’s natural environment and to deliver a circular, zero waste economy.” – Opposition Day Motion declaring Climate emergency [17]

Following public pressure and a string of minor jurisdictions declaring their own climate emergencies, the UK parliament voted in favour of an opposition motion declaring a climate emergency. The declaration of such an emergency was a demand of the Extinction Rebellion protests [53]. The declaration itself garnered some media attention [62,63]. Polling in September

⁷ For an example from Australia, see Sutton, Malcom, ‘Climate change student strike inspired by politically correct teaching’, <https://www.abc.net.au/news/2019-03-14/politically-correct-teaching-to-blame-for-climate-change-strike/10897682>, accessed 15 August 2018.

2019 also indicated large majorities in multiple countries perceiving a climate emergency, with 74% agreeing with this in the UK – the second lowest of 8 democracies polled [64]. With majorities recognising this, such an announcement was a convenient way to placate protesters and appear concerned without any concrete policy obligations attached to the declaration.

In a sense the discursive shift to framing climate change as an ‘emergency’ is similar to the ‘12 years to save the world’ or Extinction Rebellion narratives, in that it suggests far greater urgency than previously appreciated. However, as a framing device it lacks the apocalyptic finality of the other narratives and is therefore less of a hostage to fortune. The implied plot is one of more dramatic decline than previously apprehended, though without binding actions associated with it. The heroes and villains of the story depend on who is narrating, which provides a useful degree of strategic ambiguity at the cost of prescribing specific responses. For the opposition, the incumbent government are the villains for persistently failing for doing enough to reduce emissions and carbon consumption. For the incumbents, it is all too easy to suggest that they are acting and other countries are more at fault.

The declaration of emergency at both local and national levels has the potential to unify and coordinate action at a national scale. It therefore holds promise as an organisational strategic narrative. Its weakness currently is the uncertain relationship between rhetoric and action. Declaring an emergency is one thing. Specific action to address it is another.

The Conservative UK government, preoccupied at the time of writing with the politics and practicalities of Brexit, lacks a coherent vision of its climate policy agenda. It appears at once to be promoting international leadership on the issue to perpetuate the idea that Britain still ‘punches above its weight’ in world affairs. On the other hand, it has instigated policy shifts that undermine efforts to move to a more sustainable energy system. Government inaction reduces its credibility and public sentiment indicates this – 74% may accept the idea of a climate emergency, but only 23% believe the government is doing enough in response [64]. The government therefore lacks credibility as narrator of the ‘climate emergency’ narrative, since there is a too obvious action gap between its actions and words. Nevertheless, its climate emergency narrative reinforces the strategic narratives and actions of the schoolchildren and activists in the UK and worldwide, in word if not in deed.

3.6 Narrative 5: “Our plastic straws are choking the planet”

A recurrent issue in climate change communication is how to stimulate behaviour change and what behaviours to target. The narrative landscape in the UK has seen growing calls for reduced meat consumption and flying in order to reduce carbon emissions, with movements such as ‘Veganuary’⁸ and ‘flygskam’⁹ popularised in the press, but large-scale behaviour change has often proved elusive. However, one area of environmental harm that has seen concerted action is reduction in plastic usage. The narrative that plastic usage is choking the planet is both more focused and more nebulous than other narratives identified in this paper. It is focused in that it examines how specific consumer choices cause environmental damage. It is more nebulous in that it looks more generally at harm to the environment rather than a coordinated and holistic policy response to climate change.

This narrative has seen particular traction around the issue of ocean plastics. One of the most successful pieces of media that aligns with this narrative was the broadcast of a special episode of the BBC’s Blue Planet II in which narrator David Attenborough detailed threats to ocean wildlife from human sources, including ocean plastics. Since then, there have been remarkable shifts in public and corporate behaviour towards reducing plastic use. Cafes have introduced surcharges on disposable coffee cups, companies have replaced plastic straws with paper straws and supermarkets are serving an increasing variety of household products without packaging. These may produce minor effects globally, but they reflect measurable, widespread behaviour change in response to raised awareness of a specific issue.

What differentiates this strategic narrative from the others in this list is the combination of narrative breach and the credibility of its narrator. To recap, narrative breach concerns how far the plot of a story deviates from expectations. Attenborough’s documentary provided footage of fields of ocean plastics in the Pacific vaster than most will have imagined and in remote areas they will never have visited. Most will have seen in media coverage and in person vast piles of plastic in landfill but will not have swum amongst a sea of plastic, or seen animals fighting to swim while attached to it. The narrative of environmental harm attached to the footage thus provided a far more dramatic story than most appreciated prior to viewing it. This, aligned to Attenborough’s

⁸ The practice of going vegan in the month of January

⁹ A concept that emerged in Sweden meaning ‘flight-shame’

credibility as the most popular person in Britain in YouGov polling in November 2018 [65], lends the strategic narrative additional authority.

The narrative is undermined not by artful storytelling of opponents – it is hard to argue that the images of plastics inundating the ocean are in any way positive. Instead it has been undermined by government policy behaviour, where in Britain, austerity-induced cuts have led to scandals revealing that local governments claiming to recycle plastic are in fact burning it or putting it in landfill instead [66]. The risk then, as per the ‘Every Little Helps’ narrative in Bushell et al’s 2017 paper [12], is that people become demoralised that their minor actions are pointless when larger action is not being taken by their governments.

Despite the popularity of the plastics narrative, and its potential strength against counternarrative, its strength may have unintended consequences. There are instances in which consumer choice narratives have overwhelmed calls for collective action. For example, Bryson et al. [67] present the case of lead contamination from smelters in Australia becoming re-framed as a household problem rather than a regulatory issue, with subsequent government policy focusing on personal behaviours that would exacerbate contamination. Indeed, oil and gas companies have been accused by some environmental activists of cynically promoting consumer choice narratives to stymie climate action (see for example [68]).

4 Discussion

4.1 The Evolving Narrative Landscape

Compared to Bushell et al.'s 2017 analysis, the narrative space in which actors are competing to shift behaviour and policy in favour of climate change mitigation remains predictably complex. That said, there are threads of overlap which suggest greater coherence than previously [12]. The IPCC, Extinction Rebellion, striking schoolchildren, and the government, are each narrating some variant of a narrative conveying far greater urgency to address the issue than previously. These narratives vary in their focus – government policy, emotive calls to save the world for future generations, or the necessity of an uprising to address the issue – but the plot's causal (if not temporal) logic is broadly similar.

Climate change strategic narratives are not communicated in a vacuum, however. They shape and reflect broader political discourse. In the UK, following the Brexit vote, a master narrative has emerged that life in the country can be explained by the old acting selfishly and denying the young a viable future, be it affordable housing, pensions, or in the case of climate change, a habitable planet. These ideas of intergenerational injustice bear some similarity to the Global Justice Movement of the turn of the twenty-first century, which pitted the *1 per cent* against the *99 per cent*. Now, however, right wing populists are pitting *the people* against *elites*, while promoting a range of conspiracy theories of which climate change denial is a prominent example. The information environment in which climate change strategic narratives are contested appears to be shaped more by partisan affiliation rather than a scientific consensus that continues to grow. It appears, at least anecdotally, as more toxic, with strategic narrators viewing public discourse increasingly through the lens of 'culture wars' rather than the democratic ideal of civilised, reasoned discourse to solve society's problems.

This has not necessarily shaped the *content* of climate change strategic narratives profoundly. Rather, it is behaviours that have shifted, where in countries such as the US, Brazil and the UK, right wing governments are rolling back policies to mitigate the effects of climate change and focusing on other priorities instead. The Trump government is turning back towards coal, the Bolsonaro regime is clearing Amazon rainforest at record speeds, and the UK is rolling back subsidies on electric vehicles.

Governments, such as the UK's, appear to be willing to recognise the urgency of action on climate change rhetorically, while hedging actual commitments to respond. Concerned citizens may therefore not be able to rely on central governments driving the process of strategic narration to persuade populations to change behaviour to mitigate the harm caused by climate change.

Despite this, among a range of target audiences, consensus on the urgency of action appears to be growing [69]. Our analysis suggests that this could be related to a series of linked narratives emerging from different sources and targeted at different audiences rather than a single, centralised account. Extinction Rebellion's narrative, combined with its actions, appear, at least *prima facie*, resonant to middle class and left-leaning audiences. More conservative audiences, disapproving of the group's disruptive behaviour, are more likely to be sympathetic to government authorities' co-option of emergency language. The actions and concern of schoolchildren has the potential to resonate with a wider audience of parents and young people, and an avenue for unifying different generations at a time when the discourse on Brexit polarises the young and old. It is these elements in combination that appear to be building public support for stronger action. Personal experiences may have contributed to shifting perceptions, particularly the extreme weather experienced in the UK in 2019 and enhanced coverage of extreme weather globally. However, this remains unsubstantiated. Either way, responses are still expressed in relatively minor actions, such as reduced plastic usage at the individual level.

4.2 The Role of Narrators

Our analysis highlights the importance of *who* narrates climate change strategic narratives. Extinction Rebellion's apocalyptic narrative is not novel, nor is the environmental justice movement, but it is lent added credibility by the force of will of its protesters. That said, some commentators suggest the group's association with the hippy movement undermine its credibility, preventing it from drawing in audiences beyond the political left [70,71]. Schoolchildren as narrators calling for shifts in government policy created a new dynamic in the information environment, drawing on the authenticity of youth, and intergenerational tensions within society that traditional media have done much to promote.

As previously argued, the narrative and policy landscape may be shifting to limit central government's ability and credibility to narrate. But what of international organisations? Consider as an example the IPCC. The first narrative examined found its genesis in the IPCC's Special Report into global warming of 1.5°C. Further, the urgency advocated by Extinction Rebellion and

Greta Thunberg followed the report's publication. What role could the IPCC play in persuading publics to change either behaviour or support for ambitious mitigation policies?

The IPCC has a widely noted limited permanent institutional capacity to project a narrative [72–74], with a small secretariat of only 13 situated in Geneva. The need to upscale the organisation's communications capacity was noted in the statement of intent ahead of a communications meeting in Oslo [75]. An analysis of its procedures found that it had responded too slowly to errors in its Fourth Assessment Report (AR4), in part due to its limited capacity [76]. The straying of the '12 years narrative' far from the original statements in the Special Report underscores this issue.

Furthermore, organisations such as the IPCC are highly politically constrained both constitutionally and by the stakeholders necessary for its functioning. Constitutionally the IPCC is committed to being non-normative, aiming for “policy relevancy without prescription” [77]. Narratives advocating any particular action would fall afoul of this. Stakeholders constrain the IPCC as it necessarily must have reports accepted by governments with contrasting policy aims and stated views on climate science. The heavily constrained nature of the IPCC was emphasised in a series of semi-structured interviews conducted in 2016 [78]. Other multi-national organisations are likely to face similar constraints on the ability to narrate. Pleasing everyone may satisfy no one as resulting narratives will not be specific enough to engage effectively.

The narrative originally emerging from the IPCC report has exerted notable influence generally on the UK discourse; it has not come through government communication, but through grassroots activists who have appropriated the narrative's urgency into their own messaging. This suggests that Bushell et al.'s 2017 analysis needs revision. It emphasised the need for a unifying strategic narrative projected from the top down, most likely by government. In contrast, our assessment of the narrative landscape in 2019 suggests that greatest optimism should be placed in pluralistic strategic narratives emerging from below. Drawing on Greimas, if anything the IPCC's character in the story is that of the 'helper' rather than the protagonist – providing an evidence base for supporters of action to strengthen their claims.

Large organisations may be too politically constrained to form compelling narratives or otherwise lack the credibility of smaller-scale narrators in a political climate that places additional value on narrator credibility. Just as a camel is 'a horse designed by committee' large organisations may be unable to decide on streamlined narratives that encompass all perspectives without being too vague

to be meaningful. As organisations grow, they may lose control of the narratives they seek to project: perhaps this is being nascently seen with Extinction Rebellion as copycat movements have sprung up that may confuse the core message [79].

4.3 The Need for Narrative Pluralism

Three of the strategic narratives analysed here are notable for their apparently grassroots, emergent nature. The need for greater urgency in dealing with climate change seems increasingly well established. But the narratives instantiating this most powerfully have appeared not from governments, but from emergent social movements frustrated at official inaction. Hence Extinction Rebellion's call for insurgency to save the world, or Greta Thunberg's call to preserve the planet for future generations. Such movements take advantage of digital connectivity to coordinate and spread globally. On a given day, a global 'imagined' community of activists can come together to call for decisive action. As narrators, their stories are grounded in local concerns – air pollution outside primary schools, local flooding or wildfires, crop devastation or water shortages. Narratives emerging from the bottom-up can still be strategic. Complexity theorists examining digital communication have shown how spontaneous coordination can emerge unpredictably in the digital environment [80], as certain individuals and causes go viral. This spontaneity is relative – social movements are typically initiated by an elite vanguard attempting to bring the masses along with them. The point is that more authentic narration will be derived from a plurality of narratives from civil society rather than relying on the stage-managed statements typical of government communication campaigns. The more congruent these narratives are, the more they can reinforce each other, making each seem a more compelling and common-sensical interpretation of reality.

4.4 Counter-narrative and reaction

The caveat is that grassroots organisation and bottom-up narration are also tactics available to opponents of climate change mitigation policy. Manipulating social media to give the false impression of mass support is a widely recognised practice. A recent example is provided by the firm CTF, ran by a former Conservative Party campaign strategist, Lynton Crosby. It was found to have created unbranded 'news' websites on Facebook promoting a range of actors, spreading disinformation under the guise of authentic news [81]. This included websites attacking subsidies for wind farms and promoting fossil fuels. Combined with computational propaganda, such as

using bots to amplify the popularity of content, such methods can readily give a false impression of genuine grassroots activism, and are available to both sides of climate change debates. This is an evolving landscape, and a crucial area for future climate change communication research.

Indeed, this last point provides a reminder of the need for more research to examine the strategic narratives of climate change denialists. This was outside the scope of this paper, but we acknowledge it as a crucial issue, and one being examined in the authors' ongoing research. Most climate change communication research focuses on how to persuade publics to engage in mitigation behaviours, since as is widely publicised, the overwhelming proportion of the world's climate change academics agree on its anthropogenic cause [82]. Comparatively little research focuses explicitly on denialist strategic narratives, yet these have likely evolved too in a competitive media environment. Narratives can be countered in multiple ways. One is to attack the credibility of the narrator or a story's characters, as Greta Thunberg has experienced in recent months [83]. Other tactics opponents can use include seeking to falsify the rational arguments underpinning narratives, offering people an emotionally appealing alternative to inconvenient behaviour changes, or simply lying [84]. To what extent denialists are employing these elements, in what combination in different contexts, and how audiences interpret this, is a vital avenue for future research.

5 Conclusion

This paper has identified five narratives that became prominent after the IPCC's 1.5°C special report on climate change. Each frames the need for action on climate change differently. These narratives have mostly been generated not by top-down organisations, but have come about through the interaction of civil society participants such as campaign groups. These new narrators appear to have generated significant attention in countries such as the UK, where climate change-related civil disobedience has grown in scope and scale. However, whether such narrators are more capable of persuading governments, businesses and citizens to do more to mitigate climate change remains to be seen. This article has suggested mechanisms through which these narratives may be successfully encouraging greater activism, but now more robust and extensive research is needed to substantiate these provisional claims.

Traditionally understood, strategy is the top-down organisation of a campaign. But strategic narratives need not be top-down. As has been examined, civil society is perfectly capable of

producing narratives from the bottom up. In fact, the narration of members of civil society may be more credible to a number of audiences. At a time where trust between citizens and government appears to be limited, calls, such as that of Bushell et al [16], for government organisations to lead as climate communicators may be misplaced (even if governments need to take significant action). Instead, organisations promoting climate change mitigation behaviour may be better off promoting opportunities within civil society for ordinary citizens to tell their own, human, stories of their experiences of the changing climate. We acknowledge the need for systematic research to substantiate these provisional claims, however.

Strategic narratives emerging in this decentralised way seem to appear more authentic and grounded in local experience, although they risk being fragmented. This does not mean that coordination is impossible, however. The youth climate strikers illustrate how local activism can inspire a global response, providing it is based on a central idea or cause that can be generalised to other contexts. In that case it was the hypocrisy of politicians commonly claiming that they wish to preserve the world for future generations, while maintaining policies that do the opposite. Digital communication networks can facilitate coordination, and the sharing of stories from civil society in different countries and contexts. Decentralised strategic narration and leadership are not incompatible either – a lesson from populist movements in recent years is that even billionaires can manage to communicate in a way that convinces significant audiences that they are locally grounded and authentic.

What we are arguing for is greater research attention to how the emergence of a broader range of narrators from civil society shapes climate change communication. For example, this could comprise experimental research examining how the persuasiveness of a narrative changes when apparently delivered by different narrators. Alternatively, it could be comparative research to substantiate how transnational climate change activism emerging from civil society in one country is received in others.

Climate change is not one issue. It is not simply the increasing temperature of the planet, it is desertification, sea level rise, forced climate migration, climate conflict, biodiversity loss and much more. It encompasses all of these challenges. Likewise, the narratives that we use to make sense of the changing world cannot focus on one set of values, on singular narrators or on single actions.

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