CLIMATE CHANGE AND JOURNALISM

NEGOTIATING RIFTS OF TIME

Edited by
Henrik Bødker and Hanna E. Morris

Climate Change and Journalism

This edited collection addresses climate change journalism from the perspective of temporality, showcasing how various time scales—from geology, meteorology, politics, journalism, and lived cultures—interact with journalism around the world.

Analyzing the meetings of and schisms between various temporalities as they emerge from reporting on climate change globally, *Climate Change and Journalism: Negotiating Rifts of Time* asks how climate change as a temporal process gets inscribed within the temporalities of journalism. The overarching question of climate change journalism and its relationship to temporality is considered through the themes of environmental justice and slow violence, editorial interventions, ecological loss, and political and religious contexts, which are in turn explored through a selection of case studies from the US, France, Thailand, Brazil, Australia, Spain, Mexico, Canada, Iceland, and the UK.

This is an insightful resource for students and scholars in the fields of journalism, media studies, environmental communication, and communications generally.

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Foreword

Timescapes of climate change: a challenge for the media

Barbara Adam

Across the world people are experiencing unprecedented climate phenomena: hottest springs, summers and/or winters, accompanied by the 'worst' droughts, floods, wildfires and storms as well as longest periods of extremes of any of the above. These are all changes in climate now and generally reported as such in the mainstream media. Why then does the concept of 'climate change' continue to be associated with temporal distance? Why is it still generally assumed to be a threat beyond experience that affects only unknown strangers in some distant open-ended future?

In recent years, media coverage of Extinction Rebellion's demonstrations together with Greta Thunberg's strikes and passionate speeches managed to bring the threat temporally closer to the here-and-now of present generations of young people. Thunberg is accusing the current generation of adults of irresponsibility, of stealing the younger generation's future by pursuing head-in-the sand policies and lame strategies. If current world leaders were to accord the climate crisis the seriousness it deserves, she argues passionately, they would act differently and change their policies accordingly. 'If our house was falling apart', she writes, 'the media wouldn't be writing about anything else. The on-going climate and ecological crisis would make up all the headlines' (Thunberg, 2019, p. 50). But would that really be the case? And what might be some of the difficulties involved?

In this Foreword to *Climate Change and Journalism: Negotiating Rifts of Time,* I would like to outline some temporal features and complexities of climate change that may help to shed light on the disconnect between the experience of climate extremes and some of the treatments of climate change in the media, as described in this collection of essays on the subject. Along the way I want to highlight some temporal characteristics of news-worthiness and suggest that these tend to sit uncomfortably with the climate's high level of temporal complexity. This leads me to raise some questions about time and to focus on embedded implicit assumptions that are worthy of exploration, as I consider them to be both a basis for understanding and a foundation for doing things differently.

As I argue in *Timescapes of Modernity* (1998), when journalists report on climate change, they occupy multiple positions and roles in the contemporary

societies they are located in. Their task is to inform on, translate and interpret the scientific data they are reporting on while relating the complexity of their subject matter to both the political contexts of the day and people's experiences. As channels of information journalists are charged to present specialist knowledge in accessible form, which inevitably involves re-presentation, thus re-creation in a different form. In the process, the parameters of the issues and debates are (re-)defined. In the context of climate change, the media are therefore prime sources of knowledge that would otherwise remain inaccessible to the general public.

As such, they carry a heavy burden on their shoulders, a responsibility that does not sit comfortably with their own self-perception, that is, their understanding of themselves as harbingers of news, disseminators of matters of human interest and providers of a critical perspective on the more shady aspects of socio-political and socio-economic life (Adam, 1998, p. 165).

Socio-environmental hazards in general and climate change in particular demand of the media levels of analysis they are not particularly well equipped to provide. Importantly, time happens to be centrally implicated in that difficulty. A brief look at news media helps to illustrate the point and can serve as an example for the wider temporal complexities involved in the mediation of climate change in contexts of political, scientific, technological and lived times.

The very idea of 'news' has embedded within it a number of implicit, taken-for-granted assumptions. It implies something that is of the here-and-now, not previously known, often unexpected. To be newsworthy, therefore, an article, broadcast or blog is expected to be characterised by urgency, immediacy, timeliness, novelty or at least recency. These values are well suited to single climate *disasters,* such as damaging floods or wildfires burning out of control, given that they are occurring in the present. They sit less well with issues of climate *change* that are complex, systemic, on-going, indeterminate and often so extended as to be imperceptible within single life times. Importantly, climate change is a process that is distributed across space and extends into the there-and then of open pasts and futures, thus resides nowhere and no-when in particular. These characteristics are clearly at odds with ones that make a good story in the news media. Which means the open distributed nature of climate change makes it less newsworthy and mediagenic than climate events such as hurricanes, floods, droughts and wildfires.

A number of issues feed into this difficulty. Let me outline here just a few, which I will further explore below. As an on-going issue that extends not just over space but also over undefined periods without resolution, climate change requires repeated coverage. This means, it needs to encompass not only media memory but also careful planning with respect to which angle to present, at what time, and in which order. This spatio-temporal extension of climate change in conjunction with its associated complexity frustrates journalists' need to be as succinct as possible and present stories in pre-defined spaces and sound bites. A second issue relates to 'future facts' as these are located not like conventional facts in the past or present but in the not-yet of calculations and projections. Clearly some of the punchiness

and persuasiveness gets lost when journalists are required to differentiate in their reporting between scientific evidence based on facts, probability calculations and models. This problem is amplified by the difficulty of supplying captivating images of future states and events. Images are powerful communicators and, as such, are tied intimately to the impact of specific news items. Here too the temporal extension of climate change is posing problems for its mediation as 'news'. Imagery that is unambiguously associated with climate *change* rather than single climate *events* tends to be extremely limited. Because evidence-based photographic images of the future are an impossibility, the available stock of signifiers seems to be limited to satellite images of receding ice coverage, melting ice-caps and polar bears marooned on small bits of floating ice. Furthermore, these images accentuate not only the remoteness of climate change for the majority of people on earth but their paucity and resulting predictability also contribute to the dulling of emotional involvement. Where factual photography can touch hearts, art may well be better placed to stir emotions about the not-yet.

   With even the few issues raised above, it becomes apparent that the mediation of news, as the delimiting here and now of events, has to be re-thought in the context of long-term and continuous climate change (Adam, 2000, p. 122). In addition, it requires shifts in mediation practices from event-based reporting of isolated facts to interpretation and from description of factual evidence to historical, projective and normative analyses. From a temporal perspective, therefore, 'climate change news' feels almost like a contradiction in terms and time is centrally implicated in the dissonance. The way time is understood and approached, therefore, is worthy of further development.

   Journalists' default mode of communication is that of the report. Their mediation of climate change is no exception. Reports deal with facts and facts are quantifiable: what, how big, how long and how often, for example, are key questions addressed in reports. However, in the case of climate *change* rather than single climate events, the relation between time and factuality is an uneasy one, given that climate change is an on-going process that extends beyond the realm of experience, beyond both mediators' and scientists' lifetimes, and beyond what can be known with certainty. The tension arises from a rarely explicated difference between past, present and future facts, especially those of the open future. And it relates to the kind of time that is embedded in such reports. As I seek to show below, there is more to time than rifts of scale, given that the time of climate change extends beyond the here-and-now and beyond the quantifiable measure.

   When phenomena extend from now into open pasts and futures then questions of scale tend to become the dominant temporal issue. Clearly, it makes a huge difference whether the timescale extends over days, years, decades or millennia and it gets further complicated when temporal layering means numerous timescales need to be evoked simultaneously. As Chris Groves explains,

> There is no observational data which archives previous human experience of human-caused climatic change, along with its consequences for human

societies. This places scientific investigation into the phenomenon in a difficult position. Careful curation of many different and often difficult to compare sources of past data on climatic change and its association with greenhouse gases is coupled with the construction of models that simulate events which have not yet happened […], and which, given the potential consequences of ACC [Anthropogenic Climate Change], should actually be prevented from happening. Consequently the idealized observational scientific method appealed to by the CEI [Competitive Enterprise Institute] has little purchase on the problem. But this is so for much scientific work, where novel phenomena are of interest.

(Groves, 2019, p. 2)

If this is a difficulty for climate science, how much more so is this the case for its mediation and translation into accessible language and form of communication, as this collection of essays demonstrates. Importantly, rifts of time extend beyond the quantifiable time of time frames and scales to a number of additional temporal features that are deeply implicated in climate change and its mediation. Beyond questions of scale is a need to appreciate that there is more to time than calendars and clocks, which render it amenable to measurement and quantification. The notion of 'rifts of time' suggests different kinds of time or at least different aspects of it. I want to outline here a cluster of aspects or features of time that I have defined in previous work as *timescape* (Adam, 1998, 2004). In addition to the external, absolute quantifiable time symbolised by the clock, I have identified *temporality* as the process-world of change, its *tempo* or speed, its *timing* and the modalities of *past, present and future*. Not their detailed description but the diversity of these features is at issue here, as is their interrelation and mutual implication.

The quantifiable time that frames events is primarily a time that is context independent. One hour measures one hour irrespective of where and when you are: summer and winter in the Southern or Northern hemisphere, today or in fifty years from now. As such, it enables the co-ordination of socio-environmental events in a common time frame. Thus, climate change targets, for example, enable the creation of a common frame for action across the globe. In contrast, the time frame of a life, an individual oak tree or a specific climate event is context dependent. In everyday life, as in media reports, people move freely between these two types of time frames without paying much attention to the differences. Once time is elevated and focused on explicitly, however, there is a need to take account of this distinction as well as all the others I identify below.

In contrast to the time frame, which tends to be bounded and objectively verifiable, *temporality* encompasses the processual change aspects of life and regeneration. Time here is internal to the climate change phenomena under consideration. As time within a system, temporality is lived and experienced as change process that might include, for example, growth and decay, development and ageing, emergence, creativity and learning. Temporality is the systemic time of on-going, non-linear change away from quantification and facts. It thus

entails a shift of standpoint from an objective, external observer perspective to one acknowledging the contextual, system-specific times within (*Eigenzeiten* [1]). The temporality of a wildfire burning out of control, a cloudburst, change in the arctic methane deposits of the Latev Sea in Russia, or atmospheric change are all recognized as unique and incommensurable. Moreover, a focus on temporality in nature shows everything to be embedded in seasonal cycles and marked by directionality: spring returns, but never exactly the same as in previous years. The Arctic ice is reducing and the sea water table rising. People grow and die in the direction from young to old rather than the other way around. Order deteriorates and requires energy to maintain it. Change and knowledge accumulate. There is no unchanging and no un-knowing, only moving on and forgetting what had been known, with both the changed and forgotten leaving physical and mental memory traces respectively. A focus on temporality shows that change is inescapable and that both sameness and reversibility are impossible. Importantly, it reveals that the world is irrevocably and irreversibly different with every change process, every action, interaction and every transaction as they ripple outwards into interconnected and interdependent open futures. Thus, the idea of climate *change* indicates that temporality rather than the quantitative measure is its primary time feature. Awareness of the differences between the abstract measure and the context- and system-specific temporalities of climate change, therefore, should belong to the basic toolkit of journalists who mediate between scientific and everyday knowledge.

Tempo as a third feature of time refers to the speed, intensity and velocity of processes and actions. As such, it too is a central feature of all change. In processes, tempo is system-specific, variable and contextually unique. The tempo of clock-time, in contrast, is invariable and pre-set by the designer. For the clock, variation in tempo would mean that the clock is malfunctioning. The wide-ranging tempi of climate change occur in specific contexts such as the worlds of water and ice, of rock strata of living beings and machines, to name just a few examples. They too are characterised by widely diverging and dissonant speeds. Their tempi may range from very slow sedimentation processes via lived rhythmicities of bodies to IT communications at almost the speed of light. While some processes operate at the level of embodied time, others are conducted on the basis of clock-time and others still are being connected in instantaneous and simultaneous networks of information exchange. With before-and-after comparisons the speed of change may be established on the basis of past and present data or be projectively calculated, as would be the case for the anticipated speed of change in climate phenomena. This is clearly difficult to achieve when the tempi of climate change range from glacially slow beyond human history and people's lifetimes to intensifications of change leading to sudden tipping points. Importantly, those diverse speeds are nested, interrelated and combined into overarching rhythms of bodies, social relations, institutions and natural processes. While the sciences concerned with climate change are aware of the different qualities and intensities of tempi involved, in everyday life these tend to be handled without giving much thought to the matter. For climate change

journalists, this diversity is not merely difficult to report on but even more so to mediate and communicate.

Timing, the fourth feature of the timescape cluster, relates to the synchronisation, co-ordination and structuring of actions and events in relation to climate change mitigation and international structures of regulation. It covers the harmonisation of a widely diverse range of actions, events, processes and structures. Importantly, it acknowledges that there is a right, best and/or optimal time for action. For journalists there is a need to encompass in their mediations the complexity entailed in the synchronisation and integration of the diverse time logics of, for example, time-space distantiated[2] climate change processes, scientific research, politics, international relations, administration and media organisations coupled with respectively asserted right times for action. This, in turn, demands of journalists a measure of awareness about the modalities of time and their role in scientific and everyday understandings of climate change.

When our focus shifts to the modalities of past, present and future, rather different features of time come to the fore. While past and future are an irrelevance in the time system of clocks, where time goes round and round in designed invariability and sameness, they are central not just to human beings who are uniquely located in the past-present-future continuum of their life worlds but also for understanding climate change in its past-present-future extension that reaches back deep into earth history on the one hand and into open futures on the other. However, the perspectives associated respectively with the clock-time measure and the open extension of climate change processes should not be seen as alternatives. Rather, there is a need to come to terms with the clash of temporal logics. This means that journalists need to let go of either-or thinking and move towards an understanding that encompasses contradictions and paradoxes, multiplicities and complex implications, displacements and repressions, as well as resonances of the old in the new. These are clearly substantial challenges for a communications industry tasked to clarify, simplify and compress complexities into concise language, all highly unsuitable ways to mediate the temporal complexity of climate change.

In addition to the modalities' diversity of implications, there is an issue about the perceived reality status of the past, present and future respectively. In Western, industrial societies' thought convention, only the present is considered to be real. The past is seen as factual in so far as there is available historical evidence, while the future is perceived as neither real nor factual. Associated primarily with conjecture and imagination, the future is implicitly designated a feature of the mind. This understanding, which is still prevalent today, can be traced back to the fourth-century writings of St Augustine (Bourke 1983; Adam 2004, pp. 52–57). Such an understanding inevitably causes problems for climate change phenomena that straddle the full range of temporal modalities, where past, present and future not only interpenetrate but also mutually implicate each other and where associated intangible processes tend to have dramatic effects some time, somewhere. When the reality status is tied exclusively to phenomena that can be experienced and quantified, calculated and assessed then it is obvious that

this spells trouble for the mediation of climate change. Moreover, when 'factual evidence' in the conventional sense is not available then mediators are further confronted by the problem of disagreements. The solution, however, is not to declare climate change processes 'unreal' until effects materialise as symptoms but to establish a different understanding of 'factuality' and 'reality' for issues that are systemic and time-space-distantiated. As a future in-the-making, climate change needs to be recognised and accepted as an *engendering process in progress*, thus factual and real in ways that transcend conventional understandings.

In their efforts to furnish politicians and the public with information about climate change that can serve as bases to calculations about societal risks and public costs, journalists are searching not merely for climate change 'facts' but also for associated causal relations. The aspired answers, however, are difficult to obtain given that climate change refers to processes and phenomena that are interconnected, interdependent, mutually implicating and time-space distantiated, thus extend across open space into the atmosphere and into an indefinite future. Moreover, climate change processes are marked by long periods of latency during which the networks of processes continue unseen below the surface, which poses problems for establishing causal relations and with it proof of connections between symptoms, past, present and future.

In Western societies, people tend to rely on trial and error as the most common form of linear learning and to operate with an expectation of allied one-to-one linear causal relations. If I kick a ball through a neighbour's greenhouse, then it is clear that my action has caused the resulting damage and that there is an undeniable, unbroken chain of events that links my foot, the ball and the broken pane of glass. Such an understanding underpins the *modus operandi* of daily life, economics, law, politics, policy and journalism. However, these implicitly held assumptions about the nature of causal relations are rarely appropriate for climate change phenomena. When phenomena are connected in webs of interdependencies, stretched across open time-space and marked by periods of latency, an expectation of one-to-one relations between cause and effect is no longer appropriate. Numerous key climate change characteristics impact negatively on the capacity to make linear projections from the past and/ or present to the future or establish unbroken chains of causal connections from now to the future or from the future back to the past. Importantly, as recourse to causal proof recedes for such time-space distantiated, systemic processes, dissenting voices that *deny* anthropocentric climate change are provided with fertile grounds to flourish.

As this collection of essays shows, exploring climate change mediation through a temporal lens allows for unaccustomed ways of seeing and perceiving established media approaches. It shows that a number of mediation conventions come together with socio-political assumptions that collectively create barriers to knowing, appreciating, encompassing and explaining the *connections between single climate events and processes of climate change.* In contrast to the pervasive, common-sense linear-spatial perspective, even a rather basic level of time literacy coupled with an appreciation of systemic processes promises the possibility of

bridge building between single climate events and climate change processes. With such a shift in perspective, connections are opening up where none exist at present and negotiations of the rifts of time take on a different hue.

Notes

1 A key concept in Albert Einstein's relativity theory, which means own or system-specific time.
2 A term coined by Anthony Giddens during the mid-1980s and widely used since for phenomena that are extensively stretched across time and space.

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1 Climate change, journalism, and time
An introduction

Henrik Bødker and Hanna E. Morris

The impetus behind this book on climate change, journalism, and time is to assemble investigations of how journalism—in various locales—mediates the temporal complexities inherent in the broader issue of climate change. This is what we mean by the subtitle "Negotiating rifts of time." This perspective initially emerged out of our observations of the many intersections and clashes of time at stake in journalistic mediations of climate change: immediate needs against uncertain futures, experiences of the weather and cultural memories of seasonal changes, the temporalities of scientific descriptions and predictions, modern categories and hierarchies of knowledge, generational divisions between young (female) activists and middle-aged (male) politicians, schisms between hopes of industrial innovation and progress and much more fundamental changes as well as conflicts between the temporalities of causation, blame, and the bearing of burdens.

Such temporal tensions are highly related to the "mediatized environmental conflict[s]" discussed by Hutchins and Lester (2015) and which they see as "mutually constitutive interactions" between the "spheres of action" of "Activism," "Journalism," "Formal politics," and "Industry"—each of which relates to and mediates science in different ways and which collide at variously mediated "switching points." What we propose in our book is that such conflicts can also be approached and generatively examined through the lens of temporality.

Seeing the issue of climate change and journalism from this perspective is related to a more fundamental schism in the relations between the temporalities of journalism and those of climate change as both an ecological process and world history. Climate change can be understood as both absent and present, ephemeral and tangible, latent and erupting, continuous and disjointed. In this way, climate change is much like time itself: a set of complex and interlinked processes that are ascribed meaning through experiences of singular (mediated) events, numerical measurements, and/or broader social and cultural temporal imaginations, e.g. Western notions of industrial time and progress or Indigenous cosmologies. Journalism—as an institution developed in the West—is well-equipped to deal with "events" understood as distinct "breaks" or moments in time and space; one of the key challenges for journalism's handling of climate change is, however—as Adam writes in the Foreword—a fundamental "disconnect" between "climate *change*" and "climate *events*" (emphasis in the original).

The temporal scales and incremental changes inherent in climate change and related models of future trajectories are thus less compatible within conventional news and memory work as both of these forms are in need of concrete events that can be melded into journalistic practices and news values, e.g. a recently published UN report can establish a news hook because of its "newness" and singularity as an event. This incompatibility is thus both a result of scale and (in)visibility in the sense that journalism is not geared towards documenting incremental changes that are not always readily available to the senses of those doing the reporting. In our thinking about this, our project was thus initially inspired by Barbara Adam's *Timescapes of Modernity: The Environment and Invisible Hazards* (1998). In this book, Adam largely—as also evident in her succinct Foreword to this volume—conceives of the inabilities to adequately deal with climate change in Western politics and culture as a problem deeply ingrained in temporal imaginations undergirding Western modernity.

In discussing this, Adam employs the notion of a "timescape," which—as she writes in the Foreword—is a "cluster" of different temporal aspects, i.e. whether time is context dependent or not, its elements of processual change, tempo and timing. All of these temporal characteristics, as well as their interrelations, are highly relevant for thinking about the journalistic mediation of climate change. Without going into detail, this relates to the intersection of newsworthy events, individual processes of information gathering, the times of mediating and circulation technologies, professional, social, and cultural rhythms of news institutions as well as modes of news consumption, the level of synchronicity with political processes (national and/or supra-national)—all of which are encompassed by specific constructions of national time, which again are located within the times of modernity resting on rationality and progress.

The chapters in this book add to Adam's conceptual framework and develop it further by analyzing how the production of climate change journalism is the product of specific constellations or timescapes in various locations. A common but not necessarily explicitly worded concern relates, however, to Adam's thoughts on why the issue of climate change sits so uneasily within the temporal scales of journalism. One challenge is, as noted above, the question of how to identify events that can be linked to climate change. A more fundamental challenge is, however, how to explicitly connect such events, e.g. extreme weather or climate migrations, to longer histories and uncertain futures at the intersection of environmental science and politics emanating from uneven processes of globalization—and to do so on a continuous basis that can inform and engage different people. We will return to such challenges for journalism at the end of this Introduction, and here just underline that an important starting point for us, as for Adam, is that the institution of journalism is a product of modernity and is thus largely founded upon imaginaries of linear, mechanical, and a relatively constricted extended present. This is linked to the fact that journalism has co-evolved with and is tied to two core institutions of modernity: national (democratic) governance and market economics—both of which are equally ill-equipped to deal with temporal scales much beyond election cycles and mid-term

profits. Journalism, governance, and the market all cater to everyday experiences within specific—often national—communities from within which global—but unevenly distributed—present and future environmental hazards are constructed very differently. In general terms and also through a specific focus on journalism, Adam's Foreword is thus one of the important frames for reading the chapters that follow.

Another text that undergirds many of the chapters in our book is Rob Nixon's *Slow Violence and the Environmentalism of the Poor* (2011), which—in contrast to pervasive media representations of climate change—casts a long view back in order to look ahead. Through the concept of "slow violence," defined as "a violence that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all" (Nixon, 2011, p. 2), Nixon emphasizes how "time becomes an actor in complicated ways" when climate change is represented outside of a "breaking news" format (Nixon, 2011, p. 11). Indeed, Nixon (2011, p. 11) articulates that

> the explicitly temporal emphasis of slow violence allows us to keep front and center the representational challenges and imaginative dilemmas posed not just by imperceptible violence but by imperceptible change whereby violence is decoupled from its original causes by the workings of time.

A core challenge for climate journalism (as with other types of reporting), therefore, is the task of "re-coupling" cause with disparate impacts. A central issue is that the perceived invisibility and incrementality of climate change, as discussed above, is actually an indication of privilege among those doing the reporting and defining. The question of whose perspectives and histories determine how climate change is reported and defined and whose do not, is an issue of power.

Foucault (1980, p. 96) defines "power" as "capillary" in nature. Power does not operate via a simple top-down mechanism but rather, involves both discursive and non-discursive "techniques and tactics" of control forged through notions of absolute "right" and "truth" (Foucault, 1980, p. 102). The concept of slow violence implicitly highlights this and offers a conceptual framework for determining how dominant regimes of climate change representation come to be. Indeed, in contrast with some scholarly and journalistic claims, climate change is a highly visible and present part of everyday life for the most vulnerable and marginalized (Davis and Todd, 2017; Callison, 2017; Vergès, 2017). This is, in a sense, the underbelly of industrial time as described by Adam, and reveals how imperial processes of excavation, accumulation, and occupation are unevenly felt and disparately recognized. This is a topic that often rises to the surface in connection with global, diplomatic meetings seeking to balance causation and costs related to the mitigation of climate change. But it is also an element of the broader narratives that ascribe meaning to climate change within various cultural contexts (Callison, 2017, 2014).

To this end, many of the chapters in this volume center on critical cultural studies of media. Informed by postcolonial, Indigenous, feminist, and radical theories of discourse and power, these contributions recognize the pivotal need for the field of climate communication to analyze how and why journalistic representations of climate change often erase the experiences and perspectives of the most impacted and historically marginalized communities from coverage. As opposed to interrogating inequities of impact and investigating systems of power and governance, predominant forms of climate journalism tend to obscure the specificities required for accountability and eventually, political change. We understand the temporality of news media as a core problematic that needs to be grappled with in order to produce a more transformative climate coverage and yet, time remains understudied in the field of environmental communication and journalism studies. At the outset and throughout our editing process, we wanted our volume to work towards filling this void through geographically and culturally diverse engagements with climate journalism and time.

In some sense, we understand our volume as a step away from the "science communication" approach that dominates the field of climate communication, and towards a different, broader and more critical lens that centers issues of temporal translation, knowledge, and power. Indeed, we contend that climate change is a crisis that defies the unilateral scope of "science communication"—a scholarly tradition predominantly developed and deployed by researchers trained in the West or in Western schools of thought. This tradition is preoccupied with "accuracy" and whether or not scientific facts and figures are correctly translated by journalists (Boykoff and Boykoff, 2004). This preoccupation limits research on climate journalism to the study of information transfer, and often pushes to the background more critical questions of knowledge production. By centering temporality, our volume seeks to elevate these critical questions by engaging with processes of meaning-making, systems of power, and movements for climate justice. Adam also points in this direction when she writes that the temporalities of climate change require "shifts in mediation practices from event-based reporting of isolated facts to interpretation and from description of factual evidence to historical, projective and normative analyses."

Grounded by specific case studies, our volume's chapters—both individually and as a collection—offer informed critiques of actually existing climate journalism as well as possible avenues for change. By "change" we mean that which brings about systemic transformations and more democratic, equitable, and just forms of reporting. This definition contrasts with the top-down vision often advanced by science communication scholars who privilege a "problem-solving" approach aimed at "fixing" the "broken" transfer of information from the top to the "masses" at the bottom (Pepermans and Maeseele, 2016). As outlined briefly above, scholars who adhere to a science communication approach tend to overlook how and why certain "messages" and "solutions"—such as technological or market mechanisms—are elevated as superior above, for instance, community-designed responses that center climate justice and equity (Callison, 2014; Carvalho, 2010; Maeseele and Raeijmaekers, 2017).

Through a focus on temporality, this volume offers a different approach to the study of climate journalism. Each chapter in our book understands journalism as more than a medium for message dissemination, in the sense that journalism also plays into larger questions of accountability. The centrality of accountability is foregrounded in our lead chapter by one of the leading scholars in the field of climate change journalism, Candis Callison, who inflects climate journalism through the lens of Indigenous knowing and practices (in North America) and thus raises important questions about the role of past absences and inequalities in journalistic renderings of the climate crisis. This focus on environmental justice and the slow and fast violences of imperial capitalism that impact Black, Indigenous, and People of Color (BIPOC) to a greater degree, is an important reference point for the sections that follow: "Editorial interventions and temporal (mis)translations," "Ecological loss," and "Temporalities of politics and religion."

The first section, "Editorial interventions and temporal (mis)translations," contains four chapters each focusing on how various temporalities play into established journalistic norms in different locations. The first chapter by Chloë Salles, "Advocating for journalistic urgency to include climate emergency: the case of three French media collectives," analyzes some of the peculiarities of climate change journalism by studying three media collectives with participants from France that each share the goal of elevating issues of climate change across French media. A key issue here is how the different but collaborating institutions and representatives within the collectives negotiate urgency and emergency in different ways. The next chapter, "Climate change news in Spanish-language social media videos: format, content, and temporality" by Leonor Solís-Rojas, analyzes the content and temporal directions of Spanish-language social media news videos and argues, among other things, that this under-examined yet widely consumed media format may have more potential to represent the temporal complexities of climate change than often assumed. The third chapter by Hanna E. Morris, "Generational anxieties in United States climate journalism," analyzes the complexities of generational time in journalistic mediations of climate change by examining *TIME* cover stories that spotlight Representative Alexandria Ocasio-Cortez and Greta Thunberg. A key issue under critical investigation in this chapter is how the trope of "generational conflict" is used by journalists to explain contemporary climate politics as opposed to cross-generational and intersectional movements for climate justice. The last chapter in this section, "Reproducing the politics of climate change in Thai newspapers" by Duangkaew Dhiensawadkij, focuses on how Thai journalism reflects official government interests by inscribing climate change into global climate politics and time, which ultimately sidelines or ignores local struggles for adaptation and resiliency.

The second section, entitled "Ecological loss," shifts the focus from more general journalistic engagements with climate change politics to instances where loss is in specific focus. The first chapter, "Climate change and the Great Barrier Reef: environmental protest, climate science, and new/s media" by Kerrie Foxwell-Norton and Claire Konkes, looks at the mediation of protests linked to

"Earth's nature superstar," the Great Barrier Reef, in two periods, the 1960s and now. The overall goal of this chapter is to investigate how the mediated interactions between important stakeholders have evolved over time and what this can tell us about the broader mediation of climate change. The second chapter in this section also focuses on a specific natural phenomenon, the Okjökull Glacier in Iceland. In "The slow violence of mourning: analyzing news discourse surrounding the Okjökull Glacier funeral," Catherine J. Bruns looks at international mediations of the funeral held for the demise of the glacier. This raises questions about our relations to nature and to death and as such forefronts important temporal issues related to how and why certain casualties of climate change are given media attention and not others. The last chapter looks at finality in a different way, namely by investigating how various types of journalism relate to what is called "Last Chance" travel journalism. The chapter, "Negotiating the conflicting temporalities of climate urgency and 'last chance' travel journalism" by Matthew Tegelberg, thus draws out important conflicts between underlying notions of exploration/excavation time and social temporalities found in the communities of the travel destinations.

The last section, entitled "Temporalities of politics and religion," encompasses three chapters that each investigates broader temporal imaginations impinging on mediations of climate change. The first chapter, "'The Amazon is ours': narrative disputes and dissonant temporalities around deforestation in the Bolsonaro government" by Suzana Serrão Magalhães, Thaiane Oliveira, Juliana Gagliardi, and Hully Falcão, focuses on how newspapers in Brazil negotiate President Jair Bolsonaro's position on the Amazon fires, which draws our attention to tensions between denial/excavation time, national/nostalgic time, and the temporalities of mitigative and adaptive measures. The second chapter, by Darren Fleet, "Spiritual temporalities: discourses of faith and climate change in Canadian petro politics," looks at how Christian temporalities merge and clash with a national identity originally based on resource excavation and how this exposes contradictory stances toward climate change in Canada. The chapter rounding off this final section casts a broader theoretical lens both backward and forward. In "Journalism as eschatology: kairos and reporting a materially changed world," Dominic Hinde critically reflects on journalism's embeddedness in the linearity of Western modernity while also raising hopes that the severity of contemporary crises may allow journalism to construct "the present as an eschatology" with the possibility of pushing beyond constricting notions of time.

All of the chapters thus, more or less explicitly, grapple with the overarching challenge of climate journalism to bridge gaps between concrete events, lived experiences, and temporal schemes that are either caught in or push beyond the temporalities sedimented by modernity in its key institutions: democracy, the market and of course, journalism. While the analyses and negotiations of such temporal schisms do not in themselves define alternative modes of mediation that may help align journalism more productively with climate change, there is an underlying hope that a deeper understanding of the temporal incompatibilities may create an awareness that points forward. By looking at very different

instances of climate journalism the chapters do, collectively, underline that an adequate understanding of climate change cannot be compartmentalised within its own journalistic section. "The distinctive features of climate change," says Tyszczuk (cited in Hulme, 2015, p. 9),

> affect every aspect of human lives, politics and culture. Climate change is too here, too there, too everywhere, too weird, too much, too big, too everything. Climate change is not a story that can be told in itself, but rather, it is now the condition for any story that might be told about cities, or our inhabitation of this fractious planet.

This necessitates a journalistic attention to issues of climate change that move beyond the most obvious and contemporary implications. This means also recognizing that climate change cannot be fully understood as simply "a planetary system of physically interconnecting processes which can faithfully be represented in mathematical models" (Hulme, 2015, p. 9) but will, as Hulme also argues, have to be seen as complex interactions between materiality and culture; this is also underlined by Adam as she calls for a focus on temporality, which "encompasses the processual change aspects of life and regeneration" rather than seeing the "quantitative measure [as] its primary feature." Yet, one could add, that this, if we follow Chakrabarty (2018, p. 6), should happen in a way that is not only a

> one-sided conversion of Earth-historical time into the time of world history [which] extracts an intellectual price, for if we do not take into account Earth-history processes that outscale our very human sense of time, we do not quite see the depth of the predicament that confronts humans today.

Translating such a view into journalism does seem like a daunting task. What we can say, as Adam writes in the Foreword, is that journalists ought to acquire "a measure of awareness about the modalities of time and their role in scientific and everyday understandings of climate change."

In addition to such an awareness—if one agrees that a central role for journalism is to provide consistent coverage of important societal issues—is the challenge of maintaining a focus on the broader issue of climate change (as Adam also underlines). The challenge of linking specific events to broader temporal processes is thus complicated by the added challenge of having to do this on a continuing basis. The underlying and continuing processes of climate change thus need to be matched by a continuous engagement among both journalists and audiences. Yet, this is indeed a challenge in a media landscape in which many piece together their news diet from a range of diverse sources. In relation to this, Bødker (2019, p. 83) writes: "While acknowledging the dangers of insularity, continuity in the relations between news organizations, journalists and audiences is key to the development of more sustained and resonant arguments within specific communities from which can grow a broader engagement."

While this is a wider issue of journalism and society, it is arguably highly pertinent here because the slow and fast violences of climate change demand a continuous focus within a thriving media ecology with robust investigative reporting and a diverse news staff.

One journalist, who has had a continuous focus on the complexities of climate change, is Mark Schapiro, whose recent book, *Seeds of Resistance: The Fight to Save Our Food Supply* (2018), is a prime example of how to investigate the intersecting processes of climate change and the ways that these are deeply entangled in commercial, political, and social issues. But apart from doing climate change journalism, Schapiro is also teaching what he calls "Earth Journalism" at the Graduate School of Journalism at the University of California, Berkeley. In his writings and teaching, Schapiro grapples with many of the temporal issues raised in this volume, and in order to end this book with a constructive conclusion that looks ahead, we invited him to write an Afterword, which he has entitled "Finding the Stories in the Big Climate Storm." By bookending the chapters in this volume with a theoretical Foreword and practice-oriented Afterword, we hope to inspire both more critical scholarship and critical journalism—as well as collaboration between the two. Indeed, the natural sciences, social sciences, humanities, as well as journalism negotiate rifts of time in both research and practice (whether consciously or not). It is therefore imperative that scholars and journalists work together—through a diversity of perspectives and lived experiences—to understand and grapple with the temporal complexities of climate change.

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2 Journalism, Indigenous knowing, and climate futures (and pasts)

Candis Callison

Introduction

In the early 2000s, as journalists struggled to report on climate change, many said it was because as a news story "climate change oozes; it doesn't break." This metaphor perhaps says as much about journalism as it does about climate change. News as it has evolved in most national contexts is event-driven. It "breaks" because news, as its name suggests, is about what's new, what's urgent, what needs awareness and attention. In some ways, news is about informing in anticipation of a future, but the future in a news framework is usually a lot more near-sighted than the term "future" might connote in almost any other context. The horizon for action needs to be fairly close in order for a subject to be considered newsworthy; a key and widely shared news value is immediacy.

When the IPCC released its 1.5 degree report in 2018, it brought the future much closer than it had been for reporting related to climate change, making it imminently less oozy by proclaiming there were twelve years in which actions should be taken in order to have meaningful consequences for mitigating impacts (Callison, 2020a). News reports highlighted the 1.5 degree report as a wake-up call to what possible and probable futures with climate change might portend. In the years prior to *and* in the wake of the report, fires raged in Australia, California, and western Canada and serial hurricanes wreaked havoc and destruction, providing major news events that coincided with the urgency of the report. Yet such ready-made breaking news doesn't mean that journalists and their editors turned to climate change as a larger context for concern or explanation.

In the United States, even for news organizations who are paying attention to climate change, the relationship between one-off weather events, seasonal occurrences, and events as evidence of climate change are not straightforward. In several analyses of media coverage, the *Columbia Journalism Review* suggested that events must be situated within the context of climate change— and that not doing so, especially by media organizations who covered both the fires *and* climate change extensively, revealed a sharp contradiction (Allsop, 2018; Vernon, 2018a, 2018b).

> The Woolsey and Camp fires [in California] are not coincidental, one-off monstrosities, but rather significant new evidence of a rapidly changing climate. Sadly, far too much media coverage has failed to draw that link. That oversight is not surprising—in turn, it fits its own trend of big news organizations investing in detailed reporting on climate change, then failing to cite it in their quick turnaround stories when the threat strikes close to home.
>
> (Allsop, 2018, n.p.)

Partly, this "oversight" might be explained by the history of how climate change has been covered in the United States as well as the challenges inherent in communicating meaningful distinctions between correlation, context and causality e.g. that climate change causes more or worse weather-related events or that it increases the overall likelihood of events (see Boykoff, 2011; Callison, 2014, 2020b; Mooney, 2008). The nuance required to describe the role of climate change as context is perhaps even more taxing than negotiating its oozi-ness. Yet, as Allsop and others argue, clear repetition of climate change as *the context* of note is the only path forward through this global crisis that is likely to become more acute—not less in the near and far future.[1]

Herein lies the challenging scope of reporting on climate change as contextual crisis—for whom is it a crisis, and when did it begin? As I've argued elsewhere, "crisis-talk fundamentally limits questions about 'how we got here' and 'what happened' to focus on 'what must be done' in order to avert the disaster that is upon us" (Callison, 2020a, p. 130). Though the future focus and ecological context of climate change in event reporting connects diverse audiences to a probable future that requires actions to avert or mitigate for, such an approach is also missing out on the larger context for climate change itself. Put a different way, reporting on climate change as a context for ecological events needs to deal with the future as if the present and past matter just as much as a crisis-laden future.

What's really at stake then in considering the impacts (both present and future) associated with climate change and performing the accountability that journalism idealizes in order to justify its storied role as narrator, watchdog, and chief discussant? Not coincidentally, looking more closely at event coverage and at which knowledge and histories (or lack thereof) get foregrounded provides vital insight (or is it hindsight?). Indeed, understanding how power relations, systems, and social orders predicated on capitalism and colonialism shape the present informs what options are available to chart a path through whatever multiple futures with climate change might hold. Whose narratives and meanings matter more and who needs a seat at the decision-making table are not secondary or tertiary questions. The next section starts with prominent examples of climate change journalism and their exclusions and then moves into considering how Indigenous approaches to journalism, knowledge, and ecological contexts might provide a more transformative path for climate change journalism. In mainstream narratives, the recent and distant pasts haven't been well accounted for, and predicted futures are also often in dire need of a more informed set of starting points.

Reporting as if the past matters

Climate change presents a range of challenges to infrastructures and systems that were put in place with the rise of capitalism and colonialism. The continued trajectory of such systems and their infrastructure are often portrayed as what's at stake in futures with climate change. Two examples illustrate this in different ways, with prominence, relevant knowledge, voices, and histories differently staked. First, consider the past several years of destructive hurricanes, often occurring serially off the coasts of heavily populated island nations and the southern U.S.. Hurricane scientists have pointed out repeatedly and vociferously since the early 2000s that coastal development and vulnerable infrastructures present more or at least an equal immediate challenge to the one posed longer term by climate change. It is much easier in some respects to focus on the bigger ecological crisis picture or the event itself rather than the mucky policies and politics of coastal development and its contributory ills that amplify climate change impacts, hurricanes, habitat destruction for nonhumans, coastal erosion, poverty and wealth, and other complex human–environment interactions (Callison, 2020b). Veteran journalists too have written about how the destruction of hurricanes "tell the story" of coastal development (Treaster, 2017) yet the meteorological nature of hurricane events and the foci on their devastation even when presented relative to other hurricanes leave little room for the broader discussion of why the destruction is so devastating.

How both capitalism and colonialism (in its many historical and current forms) contribute to the powerful impact of hurricanes is deeply linked to what a future with climate change looks like in regions that experience a hurricane season. Those discussions are emerging for Indigenous communities like Ile de Jean Charles, off the coast of New Orleans, but a focus on communities and/or potential forced migration still (like climate events generally) don't always translate into larger conversations about how and why current vulnerabilities have been produced (Callison, 2017; Ferris and Marshall Ferris, 2013; Jessee, 2020; Maldonado et al., 2013; Talaga, 2019). Indigenous communities the world over have demonstrated since time immemorial that vulnerability isn't a naturalized, normalizable, or default fact of living along a coastline or on an island. Coastal development must be situated as part of ongoing settler-colonialism that is amplified by climate change and driven by capitalistic imperatives. Yet, this deeper analysis of what kinds of stakes climate change has, and how they're unevenly distributed in the long and short term has eluded many journalists. Instead, most popular media narratives proceed as if there is an even sense of history and ecology marching forward equally regardless of geography.

In places like the Arctic where colonial encounters intensified in the mid-20th century with an umbrella agreement in Alaska in the early 1970s—and across the Canadian northern territories in the 1980s and 1990s—the conditions for understanding the future we imagine in the present (future-present) requires a more near-sighted past as the next example demonstrates. Back in the era when Gallup described climate change as on "the public's back burner" (Saad, 2004), finding direct and compelling evidence of climate change that would produce

newsworthiness was a tough job. The Iñupiaq village of Shishmaref, Alaska, provided what, for many journalists, was ample direct and visible evidence of climate change already underway.

Built on a barrier island (a long and narrow island parallel to the mainland coast that often protects the mainland from erosion and storms) in the Chuchki Sea, north of the Bering Strait, off the coast of Alaska, Shishmaref was experiencing drastic coastal erosion and permafrost melt that threatened the viability of the community in its current location. The term "climate porn" emerged at that time to describe images that included Shishmaref's buildings dramatically beginning or in the middle of their descent into the surrounding ocean (Callison, 2014). Marino, in her ethnography of the community of Shishmaref and based on fieldwork conducted through this period of intense media attention, argues that, "Shishamaref—like the concept of environmental migration itself—burst onto the scene, providing what seemed like an unmistakable example of climate change (the ice is melting!) paired with outcome (the people are fleeing!)" (2015, p. 9). Marino finds that much of the sensational reporting represented Iñupiat residents as victims and not agents in deep discussion and negotiation about their community's future. In 2016, the community voted for relocation. Such reporting sheds little light nor does it provide accountability for the colonial infrastructure that imposed vulnerabilities now amplified by climate change. This is not an atypical example, but rather as scholars have shown us, it is a well-developed archetype of media coverage of regions as different as the Arctic and South Pacific where narratives about Indigenous people are often locked into victim/hero narratives even while they are also on the so-called "front line" of impacts related to climate change and making decisions about how to navigate and adapt for varied, possible, and probable futures (Callison, 2017; Roosvall and Tegelberg, 2013, 2018).

In both of these examples, whether breaking-news of hurricane destruction or oozy-news about permafrost melt and coastal erosion, the "how we got here" question falls out of the shocking coverage of what the future-present looks like in the wake of imminent or ongoing disaster even if climate change is a central explanation as it is in Shishmaref. The contestations of histories and untold or silenced stories and experiences are not up for discussion nor are the infrastructures, systems, and structures that resulted; it is rather an assumption of the normalcy of how life carries on, with suffering for some that acts as a warning to those less precariously positioned. The present and all of its required daily endurances and injustice gets sutured over and subsumed or set aside in order to rush towards averting a future of threat, risk, and disaster. Perhaps even more problematic than the "canary in the coal mine" or "bellwether" arc of such narratives, agency both in terms of work that can be done now to curb coastal development or in response to colonial impositions of vulnerability take a back seat to the larger siren call of climate crisis (Callison, 2014, 2020a; Masco, 2017; Whyte, 2020). How to connect the local to the global then is also about how journalism perceives an issue as situated in time and connected to a past that is in many cases not well understood and difficult to narrate by those who usually do the narrating—be they mainstream experts or journalists.

In narrating the present, time provides a critical and dynamic aspect that situates ecologies as a set of ongoing relations between humans—and between humans and nonhumans. It's for these reasons that I am suggesting how journalists cover climate change must not only focus on a future with probable crises, but also a more past-informed present in which societal systems and structures have both created and amplified a lack of resilience in the face of *always flucuating* relations with and situatedness in ecological systems (Callison, 2020a). The future from this standpoint looks quite different than the standard narratives associated with climate emergency and climate crisis. And by "resilience," a now overly popularized word in climate discourse, I mean a measure of the expansion or reduction in options for varied responses that entail adaptation and mitigation—not agency or survival. Even with reduced options, as the residents of Shishmaref show us, agency, long relations with lands and waters, and what Whyte (2014) calls "collective continuance" win the day.[2]

It's relations all the way around

Indigenous scholars have been articulating this direction for analysis for some time now, drawing on settler-colonialism as a starting point for thinking about how to understand concepts like the Anthropocene and issues like climate change.[3] Whyte specifically offers time as an inextricable aspect of thinking about both climate change and injustice: "climate injustice is part of a cyclical history situated within the larger struggle of anthropogenic environmental change catalyzed by colonialism, industrialism and capitalism—not three unfortunately converging courses of history" (Whyte, 2016, p. 12). Climate change then is not the context of note, but rather an aspect of a larger context (colonialism, industrialism, capitalism) that produced, and in many cases, actively supports the ongoing trajectory of climate change towards ever more cataclysmic disaster-filled futures.

If it is systems and their infrastructures that are at risk in a future with climate change, then the questions need to shift toward who and what is at risk—and when or where there are spaces for agency and self-determination as well as what role media plays in creating more constraints or opportunities for addressing the injustices and colonialism central to the past centuries of infrastructure development and systems building. An embedded question, that perhaps dangles more awkwardly, is whether or not the systems and infrastructures that depend on capitalism, industrialism, and colonialism are entities we want to continue? And when these systems and infrastructures aren't desired by certain segments of the public, how might journalism narrate a present with multiple possible futures as well as an intolerable present? Power relations are, as scholars of climate communication and journalism have only lately begun to articulate, central to both the stories that need to be told and the ethical calculus involved in how to tell climate stories (for example, see Boykoff and Yulsman, 2013).

The current era of youth activism certainly suggests that awareness efforts about climate change have succeeded in some respects. And while the voice of

Greta Thunberg is a welcome addition, the elevation of her voice over many other young BIPOC and non-Western activists in global media illustrates just how much marginalized communities and issues of justice and equity remain on the periphery of media coverage.[4] This observation is particularly acute when it comes to reporting on Indigenous communities like Shishmaref because what hangs in the balance is not only a lack of understanding about what settler-colonialism has wrought in terms of displacement and dispossession, but also in terms of what Battiste (2017) calls "cognitive imperialism" where knowing, knowledge, and expertise are available categories for those who draw exclusively from formal Western education.

In contrast to the grand crisis narrative of climate change, what many Indigenous communities have continually pointed out is how climate change is not the first or only major ecological change. If ongoing settler colonialism and its disruptions are the larger context for understanding climate change (for example, as the latest chapter in apocalyptic ecological change) then Indigenous knowledge and frameworks for understanding relations with lands, waters, and other-than humans become the terrain for strategizing responses to climate change (Ulturgasheva, 2018; Whyte, 2017). While mainstream journalists are not likely to cover such perspectives nor are they likely to turn to Indigenous knowledge experts, Indigenous journalists in particular have begun to evolve norms and practices in order to address global systems, ongoing settler colonialism, relations with nonhumans, and the resources that Indigenous knowledge provides in adapting to climate changed futures (Callison and Young, 2020).

Indigenous-led and informed journalism

In western North America and Australia, major fire events have become the herald and exemplar of what a future with climate change might portend. In the territory of my own First Nation,[5] the Tahltan Nation in northwestern British Columbia, 2018 was a devastating year for massive wildfires that started separately. Four of these fires joined together burning through 1,180 square kilometers of land, requiring months-long evacuation and rebuilding of Telegraph Creek on the Stikine River (one of our three main communities). What our chief, Rick McLean, continually said in interviews with media, even as fires raged, is that this is the world of climate change; we have to get ready to fight more fires like this.

This future-present orientation is common among Tahltans, and in fact inspired me almost two decades ago to research public engagement with climate change. I was, at that time, amazed at how climate change wasn't a regular part of wider public discourse and orientation the way it was already for Indigenous people like my father who lived close to Tahltan lands and waters, and nonhumans. A commonality I've found among many northern communities' elders with traditional knowledge, is that they are also often more globally and regionally well-informed than stereotypical media representations might depict them, and are likely to encounter, share, and discuss media reports that explain how climate change is both a problem and an explanation.

Change is, as I have argued drawing on Indigenous scholars, scientists, journalists (2020b), and my fieldwork with Inuit leaders (2014), a constitutive part of how many Indigenous people think about their relations and their ancestors' relations with nonhumans, lands, and waters. Many, including Eveny anthropologist Olga Ulturgasheva (2018), argue that it is the rapidness and volume of climate-driven land and hydrology changes for reindeer herders from Eveny communities in Siberia that presents the problem, not the notion of change itself. Change as it is diversely articulated by Indigenous people situates the present at a crossroads between the past and the future, where ceremonies, practices, and stories help Indigenous people to understand how their ancestors have lived through the past and developed diverse knowledge, expertise, and approaches.

Wildfires are not just wildfires then—they are also about sovereignty, colonialism, infrastructure, and long-term relations with lands, waters, and nonhumans. Reporting on wildfires in varied locations provides some insights into the challenges Indigenous knowing and expertise face in mainstream discourse and how to navigate a past-informed present and future. In 2017, devastating fires hit Indigenous communities of British Columbia, specifically the Syilx, Nlaka'pamux, and Tsilhqot'in. Journalists began to report what was already available in scientific articles and science-informed reports: that burning was a common practice prior to current settler forest management practices and *might* provide a way forward. When the Canadian public broadcaster, CBC, reported on these practices, they headlined the story: "Forget Smokey the Bear: How First Nation fire wisdom is key to megafire prevention" (Brend, 2017). The story begins by telling the story of a now passed-away elder, Annie Kruger, who was appointed as a firekeeper by her community, and engaged in burning on Syilx lands in order to prevent larger out-of-control fires. She also passed on practices of warning nonhumans when fires were set. The elder firekeeper stands in contrast to the headliner, "Smokey the Bear," a cartoon figure used by the U.S. Forest Service to warn the public against forest fires. Smokey stands in for a policy of fire suppression as well as a colonial division of land, knowledge, and management practices that excluded Indigenous wisdom about burning. The article laments the loss of an expert like Kruger and says her family is now training a successor even as there's some exploration from fire managers of controlled burning as an option.

In 2018, a similar story appeared in United States public broadcasts as many grappled with California wildfires. This time the reporting was by Indigenous journalists, who focused not on the contrast of prior policies, but rather on a fuller sense of how destruction in California wildfires might have been decreased had traditional burning practices been in place—and the resilience of this knowledge and practices. Xolon Salinan journalists Debra Krol and Allison Herrera (2018), turn to a Pomo expert, Clint McKay, to explain how burning works and benefits of cultural practices like basket making, and to an Indigenous environmental historian, Dina Gilio-Whitaker, to explain how it is that this knowledge came to be excluded. Gilio-Whitaker takes them back to the United States environmental giants of the 19th-century settler canon, John Muir and

Henry David Thoreau, and points out the colonial history and context for where and how their still influential ideas emerged. Krol and Herrera write:

> The philosophy of "leave the land alone"—and that of excluding Native people in particular from their ancestral homelands to create what Muir refers to as pristine land untouched by human hands—dates to back to John Muir, best known as the father of modern environmentalism.

They quote Gilio-Whitaker: "That Native people were inferior to white Europeans was a given, and widely accepted by the general public well before and after the 19th century." Muir was actively writing at a time when "California was engaged in an open campaign of extermination of California Indians which he doesn't seem to ever have actively opposed," and he was instrumental in the creation of Yosemite National Park which involved the dispossession and expulsion of Yosemite Indians (see Gilio-Whitaker, 2019). Indigenous burning practices and the new attention to them are thus set within wider, ongoing systems of settler-colonialism "embedded in the environmental movement" and fire management practices of suppression. Krol and Herrera are clear about how Indigenous burning practices mitigate and mean less severe destruction by wildfires and that the current state reflects "seven generations of neglect"—a significant number in many Indigenous cultural frameworks for thinking about the state of relations between humans and with nonhumans, lands, and waters.

In 2019, it was unfortunately Australia's turn again in the global spotlight related to wildfires—and as many mourned the vast destruction of nonhumans and their habitats as well as human losses and suffering, Indigenous burning practices received more national and global media attention. Even with wider audiences, when Indigenous people speak about the non-inclusion of their practices, it is a conversation about history, colonialism, and sovereignty. In a *New York Times* opinion column, written for a global audience, novelist, professor and Waanyi woman, Alexis Wright (2020), quoted Murrandoo Yanner, a Gangalidda leader and expert at burning practices, as saying:

> The way forward is back. "If we can understand, learn from and imagine our place through the laws and stories of our ancestors […] then we will have true knowledge on how to live, adapt and survive in Australia, just as our ancestors did."

Wright argues that there should be a national Indigenous burning program in order to begin to mitigate for a climate changed world (see also Steffenson, 2020). Similarly, Luke Pearson (2020), a Gamilaraay man who founded *IndigenousX*—a popular Twitter account and website—wrote about his experiences during the fires for *The Guardian* and suggested a deep history of erasure (like Gilio-Whitaker's analysis) that connects colonialism to human and nonhuman suffering and includes a future-present with climate change.

> Australia was founded on the lie that this country was terra nullius. It was founded on the lie that white men are the superior species. It was founded on the lie that the country was previously "unsettled" and that importing animals, plants, pests and unsustainable farming practices was how best to "settle" this "wild" land … Within my lifetime, I have seen the same lies play out to justify the Northern Territory intervention, to attack land rights, to justify inaction on climate change, to deny the stolen generations ever happened, to dehumanise and delegitimise the plights of Indigenous peoples, the unemployed, the entire "left"-leaning population.

In Pearson's words, the past begets a present that is both perpetuating human suffering and ruptures in relations with land and nonhumans—all of which sets up a future where climate change only increases ongoing suffering.

Reading these increasingly direct and strong voices and perspectives of Indigenous experts, commentators, and journalists in Canada, the United States, and Australia who have lived under similar policies of settler-colonialism and fire management together is like witnessing a crescendo. They continually remind regional, national, and global publics that burning is a solution that springs out of their ancestors' long relations with their lands, and that the future-present must involve redress of systems and social orders rooted in colonial mindsets and destruction. Not only that, what all of these diverse Indigenous peoples continually remind us is that their ancestors were not passive inhabitants but rather active participants in the processes that shaped their lands and waters.[6] Read together in their communally acknowledged expertise, these short excerpts from Kruger, McKay, and Yanner teach us that Indigenous knowledge provides a suite of approaches to actively be in good relations at a time when deep knowing is essential for mitigating and adapting in the face of crises. As McKay summed it up, reflecting the very different underlying philosophies of settler and Pomo approaches to relations with land: "The very thing you're trying to preserve you are killing … Nature isn't here to be hands off" (Krol and Herrera, 2018).

Conclusion

This chapter promised to look closely at emergent journalism practices with a focus on thinking about how questions and assumptions change when settler colonialism is considered alongside and as a key precedent for understanding climate change and its impacts. In many ways, this chapter questions both how journalism is reporting on climate change *and* assertions and edicts that it should report on climate change as *the context of note* for high-profile ecological disasters. These assertions miss the core challenge of climate change itself—that much of the high-profile risk and vulnerability we're already seeing stems from the imposition of colonialism and capitalism that disrupted relations and practices that kept Indigenous people in good relations with their lands, waters, and nonhuman relatives. In a recent non-academic article,

Neale (2020) a non-Indigenous anthropologist who researches Indigenous burning practices in Australia, describes being "baffled" by "media accounts that assume Aboriginal peoples' fire knowledge needs rediscovering." He asks questions that address some of the core challenges around contexts for reporting on climate change:

> How Aboriginal peoples want to approach the current interest in their fire knowledge is a matter entirely for them. For non-Indigenous people with an established or new interest in this issue, the vital question to ask is: what are we trying to achieve in seeking to support cultural burning? Are we, the beneficiaries of colonial dispossession, simply trying to make our lifestyles, houses and property safer from the increasingly combustible landscapes we have helped create? After everything, are we still looking for help without reciprocity?

Neale draws on Whyte's observations that Indigenous knowledge has often been considered supplemental and instead suggests a turn to foregrounding of Indigenous rights, leadership and self-determination.

> My hope is that, quite soon, when we whitefellas talk about cultural burning, we won't be talking about an idealised traditional technique that might have helped us with our problems if only we'd been able to get our hands on it.

In this, I read an expansion beyond Indigenous communities to thinking about how all of society and its institutions (including media) might contribute to Whyte's notion of collective continuance (Callison, 2017; Whyte, 2013). In a published conversation (2020) between Neale and Indigenous fire practitioners, Yorta Yorta and Dja Dja Wurrung man Mick Bourke and Bangarang and Dja Dja Wurrung man Amos Atkinson, this is a primary theme that emerges. Bourke and Atkinson describe the history and dynamics of working with government and researchers, and practicing and educating their own communities and young people to use fire. Bourke's statement encapsulates both the expansion of collectivity as well as the need to "walk together" and adapt to the colonial present:

> We are really about making it a better place for everybody, so everyone can use it. What we know, we're building it up to pass it down to future generations. There's been too little passing down and nowhere to practise and do culture.
>
> (2020, p. 4–5)

Thinking in terms of collectivity, still present colonialism, reciprocity, and robust persistent Indigenous knowing and practices is not a small challenge for editors and journalists. Reporting on the environment requires a framework that often supersedes the forms and styles we have for journalism—and

its consideration of time and continuance—in part because it throws into question how it is that humans are in relation with each other and with lands, waters, and nonhumans (Callison, 2014; Callison and Young, 2020). This is a time for deep knowing and reflexivity in a way that hasn't been highlighted in scholarship or media edicts to report more and better on climate change. Climate change does indeed present a range of crises, as this book chapter describes, but how to think about climate change as a problem that is historical in nature requires a new approach for journalists.

Systems journalism, an approach suggested by Callison and Young (2020), argues that journalists must contend "with persistent critiques related to intersectionality and settler-colonialism, and re-evaluating to whom and what social order journalism is contributing." We describe it this way:

> Systems journalism asks what we might expect of the worlds we inhabit—of the intersections, interferences, interactions, resistances that are recorded, mapped, and tracked in the stories that get circulated and realities that get described. We also see a core question emerging in the kind of systems journalism that Indigenous journalists are already practicing, and given that varied sorts of settler-colonialism exist globally, it's worth asking in relation to journalism more broadly: What might good relations look like for journalists and media organizations? And how are journalists related to the worlds they inhabit?
>
> (p. 213)

In reporting on fires, hurricanes, coastal erosion, sea level rise, and permafrost melt—all indicators and impacts related to climate change—journalism bears a heavy burden of both recognizing its own contribution to social ordering through mis- and non-representation of Indigenous people, and reporting on the ongoing impacts and systems of settler-colonialism. While it's increasingly clear that Indigenous knowing and expertise offer varied and complex assets to managing a future-present with climate change, a focus on collective continuance requires a continual assessment of the systems and structures that require redress and insulation from risks and vulnerabilities. In refocusing on collective continuance, journalists must shift their practices in a way that accounts for their own location in time, place, and systems in order to consider more closely what contexts and challenges climate change presents.

Notes

1 Allsop (2019, 2020) has continued to find this occurrence in mainstream media (e.g. lack of climate change as context) as wildfires have continued to ravage Australia, the western US, and Canada in 2019 and 2020.
2 Whyte defines collective continuance as "a community's fitness for making adjustments to current or predicted change in ways that contest colonial hardships and embolden comprehensive aims at robust living" (2014, p. 602). Quoting from Callison (2017), "Whyte suggests that 'the ecological challenges of climate change are

entangled, or coupled, with political obstructions' and societal institutions can either create more constraints or opportunities for indigenous communities intent on their collective continuance (2013, p. 521)."

3 For example, in the emergence and debates about the Anthropocene as a way to understand the current moment of human impact on global earth systems, Davis and Todd (2017) point out that the onset of settler-colonialism is the starting point to understand both "its extensions into contemporary petrocapitalism" and the "severing of relations between humans and the soil, between plants and animals, between minerals and our bones," which they describe as "the logic of the Anthropocene." In other words, the Anthropocene as it has come to be observed and characterized in the present extends out of a past not well narrated or accounted for in mainstream narratives (Callison, 2020a).

4 A similar case could be made notably about COVID-19 coverage; on climate, see Burton, 2019.

5 First Nation is a term used in Canada and Australia to describe Indigenous people groups; in the U.S., the more common term is Native American tribes.

6 As Métis journalist Jade Deslisle (2020) pointed out in an article specifically focused on decolonizing ecology: "At a time when Indigenous land defenders are fighting for cultural resurgence and the application of traditional knowledge to combat the climate crisis, they are often cast as the monolithic, mystical, degrowth opposition to the secular modernity of white leftists and their fully automated socialist future."

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Part I

Editorial interventions and temporal (mis)translations

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3 Advocating for journalistic urgency to include climate emergency

The case of three media collectives

Chloë Salles

Introduction

In the wake of the publication of October 2018's Intergovernmental Panel on Climate Change (IPCC) report, three media partners founded an initiative called Covering Climate Now involving a collective of over 350 news outlets from around the world. These news outlets agreed to give priority to the coverage of the "climate emergency" during the week of the UN Climate Action Summit in New York City in September 2019. By doing so, they coordinated visibility of the topic, mirroring the climate-related social movements happening in parallel. Similar initiatives, although smaller in size, have also developed in France.

Research in "Sciences de l'information et de la communication"[1] has shown that the media coverage of environmental issues in France was triggered by activists in the 1960s. Over time, with these activists' claims for journalistic professional legitimacy, environmental coverage gained visibility in news media but also became "institutionalized," as it progressively became distanced from the initial involvement (Comby, 2009, 2012). In effect, environmental coverage was gradually stripped of its activist motivations and subsequently has become something of a soft news topic. This is evident in the lower rank it is often given amongst other news columns, but also in the way journalists cover it in a routinised way with little engagement (Frisque, 2010).

This is related to the priorities within journalism, which are characterised by a sense of urgency, not only because of the nature of news, through which it is constantly being renewed, but also structurally as a collective occupation subject to industrial processes (Pilmis, 2014). Thus, a topic's priority in the newsroom is not so much determined by the nature of the event itself. A topic's priority in the newsroom does not depend only on the relationship between the field it is occurring in and the journalists covering it (Marchetti, 2002, p. 45). It is also discursively negotiated at different moments during its development, such as when being pitched to the head of section by the journalist, when being presented at the editorial conference, or when being proof-read and cut before being published. This discursive construction also involves the section the article will be published in, and its hierarchy within the media's layout (La Haye, 1984), as well as its journalistic genre, which may have more or less prestige (Marchetti, 2002; Tunstall, 1996). As such,

research has shown that news focusing on the environment will generally be given less visibility than if it were published in the breaking news, politics, economy or society sections. This is because sections dedicated to the environment are typically characterised by their institutional nature (Comby, 2009; Frisque, 2010), and encompass less prestige and "circulation goals"[2] (Tunstall, 1996). An implication of this is that what may be presented as an emergency in some spheres of society, might be translated into something less pressing after having been "processed" by a newsroom's daily routinised urgency.[3]

So when different media decide to cooperate and form collectives with the common objective of giving climate change more visibility, does this result in the topic becoming an "emergency" within the newsroom's everyday urgency? Or is the sense of emergency lost through the newsroom's day-to-day processes? More specifically, how do these media collectives work together and what does this mean in terms of the journalists' and news media's engagement with the cause? What changes does this mobilisation involve in ordinary professional routines and the published content?

This chapter focuses on three media collectives (two of which are French): Covering Climate Now (which is international but includes eight French media partners), the Journalistes d'investigation sur l'Ecologie et le Climat (constituted of five French media outlets), and #SauverLePrésent (that includes four French media outlets). The above questions are tackled from a *sciences de l'information et de la communication* perspective combining socio-professional, socio-discursive and socio-economic approaches of the individual media outlets and the three collectives. Each collective was analysed according to its name, aims and actions, the processes behind its creation, the journalistic genres that are showcased by the coordinated coverage, and the editorial identity of the different media involved. Nine interviews were also conducted with professionals in charge of coordinating their media outlet's participation in the collective. These focused on the interviewees' journalistic pathways, their status and missions in the media for which they work, and their relationship to the respective collective. Emergency, as a temporal marker, is thus tackled in this chapter as a socio-professional and discursive construct. It is analysed through the "forms of rationalisation that operate inside the bureaucracies that are newsrooms and media" (Pimlis, 2014). The occupation of the collectives' members and their place in the media outlet, the means devoted to each group by the media, the nature of the groups' activities (i.e. training, campaigning, coordinating), and the journalistic genres that are showcased, all shed light on how the urgency of the topic is processed inside and outside the newsroom.

The forming of media collectives is not new to journalism. Amongst other reasons, writers and journalists preoccupied with environmental issues have gathered and created associations in the past, such as *l'association des Journalistes-écrivains pour la Nature et l'Environnement* in 1969 which advocated for more visibility of environmental topics within the public sphere, as well as the *Association des Journalistes Environnement* in 1994 that focused on earning more professional legitimacy for environmental journalists (Comby, 2009). In the cases analysed, the collectives work to "strengthen" the media coverage of climate change—a specific

Collective's name	Covering Climate Now	Journalistes d'investigation sur l'écologie et le climat	#Sauverle Présent
How it defines itself	"initiative"	"group"	"coalition"
Actions and periodicity	Weekly email briefings, a shared library of re-publishable articles, coordinated weeks of coverage several times a year.	Coordinated coverage approx. three times a year of first-hand experiences of climate change, coordinated investigation. Bimestrial meetings.	Monthly coordinated coverage of a topic in common, and monthly meetings.
Media members	Over 450 members worldwide. French members are: Print newspaper and online: *Les Echos* *Le Parisien* *Libération* *Politis* News agency: AFP Online-only: *Le Journal de l'environnement* *Up'magazine* *Reporterre*	Online-only: *Médiapart* *Bastamag* *Reporterre* Magazine: *La Revue Projet* (bimestrial) *Politis*(weekly)	Print newspaper and online: *Le Parisien* Online-only: *Konbini* Magazine: *Usbek &Rica* (trimestrial) Radio Station: France Culture (public)

Figure 3.1 Composition and self-description of the three media collectives.

topic presented as an emergency by scientists and activists. First, this chapter focuses on the professionals who formed these collectives, and why and how they have done so. Second, the outcomes of forming collectives for individual media are explored. Lastly, these different units of analysis—individual professionals and media outlets—are combined in order to understand how activist, communications and journalistic roles and motivations are involved in these collectives' identities, and how these contribute to processing the temporality of "climate emergency."

Diverse professional occupations and motives

Although heterogeneous in nature, media collectives are generally concerned with challenging the status quo. The three media collectives examined here are no exception, although they vary in their methods and means for change.

The blurring of boundaries between journalists and communication officers

Two of the collectives are made up of journalists, editors-in-chief, and communication officers[4] (CO), highlighting that journalists are not the only professionals interested in the climate emergency. Although the nature of the relationships between journalists and COs varies greatly, whether working for the same media or not (Pailliart, Salles and Schmitt, 2017), these relationships are always characterised by tension (Legavre, 2011). Both journalists and COs have roles in the publishing of news, and research has shown the growing "porosity" between the two occupations (Leteinturier, 2014; Patrin-Leclère, 2004), but these roles are usually distinct and distant in the news outlet.[5] #SauverLePrésent (#SLP) was founded by the CO of *Usbek & Rica*, a trimestrial magazine that focuses on societal analyses. Motivated by his own activist views—the CO had been involved in green political parties in the past—and inspired by the increase in climate-focused social movements and amateur media (such as YouTube channels), he contacted a set of newsrooms in which he had a connection. As a result, three other media outlets represented by a journalist, an editor-in-chief, and another CO agreed to collaborate. The four media outlets have very distinct identities, a characteristic of the collective seen as an opportunity for their climate change-related coverage to gain more visibility (Interviewee G, 24 April 2020). Furthermore, the collaboration was also considered to potentially expand their audiences.

An inaugural video published on DailyMotion presented the media collective and introduced the first investigation of #SLP. In this video, the representatives of each media outlet take part in explaining the editorial terms of the collaboration without any apparent occupation-related hierarchy. Adding to this impression of equal footing, is the ambiguity created by one of the COs being identified as a journalist in the heading. The fact that journalists and COs engage in discussion over editorial content shows just how exceptional climate change as an issue really is. Nevertheless, the conducted interviews clarified the members' different occupational statuses and that their decision-making was still primarily dictated by their outlets' hierarchy. Likewise, one of the media outlets assigns a different journalist to each monthly investigation, which likely impedes the ability of the investigating journalists to build a strong working relationship. Furthermore, #SLP's monthly meetings involve six people: three of the members quoted above (the rotating journalist is not always a participant), the editor-in-chief of the infotainment site *Konbini, Le Parisien*'s editor-in-chief and *Usbek & Rica*'s editor-in-chief. Two of the media outlets are represented by their COs who undertake an editor-in-chief's role by taking part in the defining of a topic and suggesting which producer or journalist could conduct the reporting (Interviewee G, 24 April 2020; Interviewee I, 18 June 2020). These roles are dependent on the specific internal organisation of both media outlets—for instance, *France Culture* hires producers to direct radio shows whilst *Usbek & Rica* is a small organisation in which "everybody has two or three roles" (Interviewee G, 24

April 2020). The variable legitimacy and treatment that climate change gets across the respective media indicates that the collective is more likely to be driven by individual motivations, rather than by the newsrooms' decision makers.

The benefits of "distanced engagement" at every level

Similar to #SLP, the initiative Covering Climate Now (CCN) also involves a variety of actors. The founding members of CCN are two journalists (one of them says he has covered climate change since 1989) and a media outlet, *The Guardian*. The list of over 450 "partners" on CCN's internet site are categorised as follows: media (wire services and news and photo agencies; newspapers; magazines, journals, and digital news sites; television and multimedia, radio and podcasts), institutions (including universities and research institutes), and independent journalists (however, this option was closed due to the overwhelming response). The fact that one of the eight French media members of CCN is represented by a CO shows that being a journalist is not a prerequisite for being a representative. Additionally, the interviews exposed that several of the French media outlets were initially connected to CCN by their editors-in-chief and not through their specialised environmental journalists. Consequently, statuses and occupations do not appear to be essential criteria in becoming a "partner" of CCN. Unlike #SLP, CCN has a clear hierarchy, with the founders having structured leadership positions. For instance, this can be seen through the communication in CCN being mainly top-down, from the founders to the 400+ media partners via weekly emails, webinars, and the internet site. Members of CCN have no obligation to communicate or meet, but they can contribute to the "sharing library," a list of articles made available for republishing. The membership conditions can therefore be argued to be consistent with "distanced engagement," a term coined by Jacques Ion, whereby he describes a contemporary ideal of mobilisation (Ion, 1997). By "distanced engagement," Ion means that those taking part in the mobilisation do so according to their own conditions of participation, including setting their own goals and making their engagement conditional and revocable at any moment. This autonomy means that membership does not necessarily require a substantial investment of time, but instead can be tokenistic. For instance, membership is likely to offer the attraction of international reputation, as its list includes globally renowned media, such as *The Guardian*.

An opportunity to learn from and share with each other

The "go-between" who initiated the *Journalistes d'investigation sur l'Ecologie et le Climat* (JIEC), under the recommendation of French NGO *Notre affaire à tous*, is a female journalist who has been covering environmental issues for nearly twenty years. In the case of this collective, all of the six members are journalists. They represent five media that are renowned for having editorial identities with a

heavy focus on environmental topics. Half of the members have over ten years of experience in covering environmental issues. Several younger members described how "enriching it is to see how other media and journalists work" (Interviewee A, 16 April 2020). They do not necessarily have the time to meet their counterparts in other circumstances, such as at press conferences. These events "aren't profitable enough" to be worth attending. "Press conferences require time, and only getting one article out of it isn't sufficient. Some specific NGO press conferences may be worthwhile when they can contribute to two or three articles" (Interviewee B, 16 April 2020). The meeting with other environmental journalists is especially interesting considering "the wide range of experience of some of them" (Interviewee A, 16 April 2020). Because of the differences in both generation and experience, the journalists that take part in JIEC have experiences from different eras of environmental journalism: activist, institutional (Comby, 2009), and more recently, specialised (Marchetti, 2002)—with young journalists trained in specific, environment-related knowledge. The gathering of these journalists offers a realm in which practices can be shared according to respective professional pathways, thus creating an opportunity to learn from each others' experiences, whether they be recent or distant.

One of the journalists said that not only do they decide on what topic to investigate together, with angles according to each media's editorial identity and periodicity, they also share contacts to facilitate the production of each other's articles (Interviewee I, 25 May 2020). This practice is quite unique across different media, considering how valuable sources are to journalists. Accumulated and strengthened over time, sources contribute to individual journalists' professional capital. The secrecy of one's sources is also heavily protected by French legislation, which means that journalists are under no legal obligation to disclose their contacts regardless of the circumstances. Moreover, the fact that journalists would share sources in the context of investigations is a testament to the trust that is shared between the different media members, and the will for the cooperation to succeed. Unlike the other two collectives, the members all interact at the same level. Additionally, the interviewees regret that they do not have more time to invest in the initiative, and one journalist explained why her participation in the collective might be undermined: "work for the JIEC competes with time I could be spending on other tasks, and this is something my editor-in-chief has commented on" (Interviewee I, 25 May 2020). In the case of JIEC, the cohesion of the group appears to be strong and decision-making is autonomous in respect to each media's hierarchy. Nevertheless, the time these journalists invest in the collaboration likely competes with the tasks they are required to perform for their own media.

Each professional's motives for joining a collective takes part in shaping the collectives' functioning. Some stay faithful to their media outlet's hierarchy and editorial identity, in similar fashion to what Cégolène Frisque describes as "ambitious posturing" (Frisque, 2010): committing to their media, yet through participating in the collective, taking part in negotiating more recognition for the topics that they cover, and thus, more dedicated space and time for them amidst the newsroom's mechanisms. Others allow for a little more distance from ties to

their own media outlet, focusing on their collaboration and its outcomes. Nevertheless, the time spent working with the collective is required to be justified to managers in some cases, including in media that traditionally cover environmental issues. Ultimately, this testifies to how individual-dependent the group's success is.

Competing for visibility: renewing editorial identities through connections

The outlets that are part of these three media collectives offer variable attention to climate according to their individual editorial identities, which are based on their histories, economic models, periodicities and a range of other factors that take part in organising content (e.g. sections, genres). The chart below, organised according to these characteristics, offers a categorisation of the media sample into three sections: generalist, social movement, and specialised. Despite the risk that lies in oversimplifying these news outlets' editorial identities, grouping them facilitates a basic understanding of the dynamics of the collectives and the media themselves.

The media located close to the adjacent circles indicates the sharing of characteristics between categories.

Generalist media looking to gain legitimacy on climate

News outlets are classified as generalist if they cover a wide range of columns for a widespread readership. These media have either dedicated environment sections (*Libération*) or "teams" (*Les Echos, Le Parisien,* AFP), or shows (France Culture). Two journalists say that they have to share their time between sections, and all of them say that they are understaffed considering the amount of environmental news they have to work on. These findings are consistent with Jean-Baptiste Comby's research, which showed that when media dedicate a column to the environment, they often provide the bare minimum means and resources (2009, p. 5). Subsequently, the motivation of the journalists involved is typically affected.

Included in the generalist category, is a national public radio station, France Culture, which has a strong analytical, if not academic, identity, drawing inspiration from scientific research for its generally in-depth interviews with experts and scientists. This has meant that France Culture has been covering environmental issues for decades. *Konbini* is an online news outlet that grew out of an infotainment company. Its specificities lie in its devotion to entertainment and its economic model based on marketing and native advertising services. Albeit leaning towards the specialised media category, it is listed amongst the generalist news outlets for its strong attachment to the breaking news agenda. Also, in this generalist category is one media outlet that initially originated from strong socialist ideals: *Libération*. It offers regular daily and weekly content focused on the environment and boasts a team of four journalists dedicated to the topic. Despite its rebellious manifesto, it has not been included in the social media movement category. Over time, this
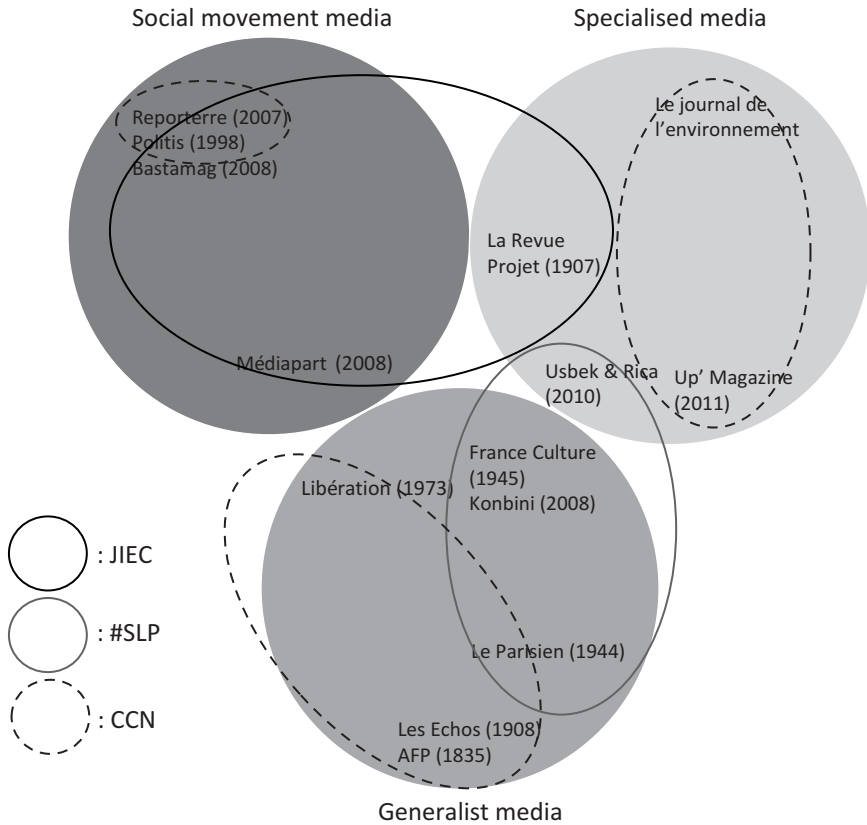
Figure 3.2 Categorisation of media samples according to editorial identities.

media outlet evolved towards a generalist news agenda (sharing its daily topics with other daily national news outlets) and is partly funded by private investors.

Although coverage of the environment already existed in most of these news outlets, belonging to the diverse climate collectives suggests renewing recognition towards the topic instead of settling for its routinised coverage as a niche column. For others to whom climate change had always been considered a distant and intangible topic to their readers (Interviewee F, 22 April 2020), connecting with other media has been an opportunity for their teams to negotiate more decisional power in the newsroom and visibility in the coverage.

"Social movement media" renewing their engagement

Yves de La Haye coined the expression "social movement media" (La Haye, 1984) to designate news outlets' discourses that are based on a critique of dominant media: "considered by them as being at the service of the governing power,

and to which they offer an alternative that is infused by these claims"(Pailliart, 2019, p. 199). The media listed in this category were all founded on specific critical claims (detailed in their manifestos or "About Us" columns on their internet sites), some of which tend to be aligned with left-wing activist movements. Three of the four media categorised as "social movement media" declare in their founding statements that they prioritise an environmental perspective to news. The fourth media offers a more generalist range of content but along an editorial identity that was founded on strong criticism of a lack of independence of many media. As such, *Médiapart* generates all of its revenue through subscriptions, not advertisements, and has grown to be considered a model for independent online media in France (Salles, 2019). Combined with this critique is an editorial identity based on investigative journalism. Although the environment, and more specifically, climate change, do not have dedicated columns in this news outlet, two journalists are appointed to these topics in the newsroom.

For these media who have been covering environmental issues, including climate change, for over a decade, collaborating with other news outlets suggests a need to renew their angle on the topic. Indeed, as the coverage of climate change increases in all categories of media, those who have always defined their identity in opposition to generalist media need to renew their distinguishing criteria. This was covered in several interviews, and was even subject to one of the interviewees questioning the fact that the traditionally environmentalist media outlet she works for had not dedicated a front page to climate change in over a year.

Broadening the audience of specialised media

Lastly, a category is devoted to specialised media. These outlets' content is aimed at niche readerships, and they often have strong editorial ties with their funders. Four news outlets are included in this category, one of which is funded by NGOs, including Catholic associations. *La revue projet*'s identity is described by its associate editor-in-chief as being a tool for reflection aimed at students and social advocacy groups, including its funders. Despite the magazine's economic dependency, and the drawing of its inspiration from scientific sources, its editorial identity leans towards the "social movement media" in its advocacy for social equality and environmental protection. *Le Journal de l'environnement* is aimed at authoritative bodies that require local, national and European updates on environmental regulations. In these two media, the environment, and more specifically climate change, are covered across several sections. *Up'magazine* is listed as a specialised media. It is supported by an "associative"[6] economic model and environmental awareness is perceptible in the way environmental issues are tackled across sections. It aims to offer content that will "shed light on the obscure corners […] of the challenges and issues that the world faces today and tomorrow."[7] And to do so, it boasts a diverse team of "authors and contributors" that are not necessarily journalists, and whose expertise in various fields is described as central to the editorial project. It clearly states that it does not aim to cover "all of the news, on a daily or hourly basis; other media already do that job,"[8] distancing itself from the generalist

news stream, yet its content does echo and offer reflections on topics covered by the generalist media agenda. For this reason, *Up'magazine* leans towards the generalist category in the chart. *Usbek & Rica*, both a magazine and an internet site, describes itself as drawing inspiration from experts, writers and other creative professionals to offer a reflection and a discussion on the future. Furthermore, the magazine depends on a hybrid economic model based on the organising and running of events (festivals, conferences, etc.) and the development of online media and native advertising via their studio. Although the magazine is quite detached from break-ing news, the internet site and the social media platforms are updated daily and serve as a bridge with the generalist media agenda. Furthermore, interviewees involved in #SLP stressed the fact that this collaboration, by associating diverse periodicities, could serve to widen their audiences. As such, *Usbek & Rica* is able to create a link between its trimestrial periodicities and the generalist news agenda, and thus access breaking news status (Interviewee G, 24 April 2020). However, one of the members believes that being part of the collective has not provided that many benefits, "maybe a little visibility, but mainly an editorial benefit in seeing how others tackle a topic in common" (Interviewee H, 18 June 2020).

There seems to be a general agreement over the fact that the climate needs to gain visibility as a journalistic topic, and on who, at an international level, already covers it best. Although all of these media outlets are competing for visibility on climate change, a topic that is relatively new to some but that others have been covering for years, most interviewees, amongst all three categories of media, quoted the same references in the coverage of climate change: *Le Monde* and *The Guardian*. As identified throughout the interviews, such consensus has increased the need for media outlets to differentiate their editorial identity from others. Whether this differentiation is undertaken inside the newsroom, in the communications office, in other places such as the media outlet or outside of it, or in all of the above, varies from one media outlet to another. This is relevant for whether climate change is treated as an emergency to be tackled by those in charge of the journalistic content, or those in charge of bench-marking and promotion for the media brand.

Collective identities at the crossroads of activism, communications and journalism

Coverage of the same news in media outlets across comparable geographical zones is common. It is what Pierre Bourdieu coined as the "circular circulation of information" (Bourdieu, 1996, p. 22) and is one of the many criticisms aimed at news media today. According to the French sociologist, news is very comparable from one media to another, not only because of individual journalists' conscious choices and decisions, but because of how structurally constraining competition can be. However, in the case of the fourteen French media outlets examined in this chapter, coordinating the very different editorial identities to cover the same topic is a conscious effort. In order to do so, discourses and practices belonging to activist, communication and journalistic fields are mobilised.

Mirroring online social movement initiatives

First, by creating collectives and investing in a topic such as climate change, all of these media outlets mirror the action of social movements. In the case of JIEC, the relation to activists is explicitly mentioned on its site. The collective was formed after having been encouraged by the French green activist association called *Notre affaire à tous* (which translates to "It is all of our responsibility"). The initial motivation shared with the activists was to focus on the "impacts of global warming here and now in order to sue the French State for inaction." News is accelerating on the front of the climate emergency. The youth movement has intensified since February and culminated with a worldwide strike on 15 March. The following day, dozens of thousands of people took to the streets for the "March of the Century."[9] The commonly called "JIEC," according to its acronym, shares the same sonority as "GIEC" (*Groupe d'experts Intergouvernemental sur l'Evolution du Climat*), the French acronym for the Intergovernmental Panel on Climate Change (IPCC). Thus, the group links itself to the scientific and institutional legitimacy and the authority of IPCC's reports.

On its internet site, Covering Climate Now is not presented as a collective, but rather as an initiative with a cause, in which they are: "committed to more and better coverage of the defining story of our time."[10] Its cause is global, quoted as bringing together "400 partners from nearly 50 countries."[11] And the means of action it offers are standard to social movements (Diani, 2003): the exchange of practical and symbolic resources, and through this, the sharing of a collective identity in order to encourage social change. The resources shared via CCN consist of the news and advice sent to partners via weekly email briefings, as well as articles available for republishing listed in an open-access library. This initiative is meant to take part in amplifying climate change stories during coordinated weeks of coverage, such as the UN summit on climate in September 2019, or more recently, the "climate solutions week" that unfolded after Earth Day on 22 April 2020. All media partners are encouraged to offer content for sharing and to republish what is already on offer according to specific guidelines.[12] Article sharing is not a typical media practice, mainly because brands usually compete for visibility using their own original content. CCN also describes these articles as "evergreen," meaning that they are easily "recyclable" (because they do not include time markers). It gives these articles an element of sustainability, echoing the initiative's greater cause. Additionally, CCN shares the same organisational model as many advocacy-orientated NGOs considering that it is funded by two philanthropic organisations: the David and Lucile Packard Foundation (that donates to environment protection-, social welfare- and justice-focused NGOs) and The Schumann Media Center (that donates to "left-of-center non-profits, particularly those in media").[13]

#SLP presents itself as an "activist initiative." When searching social media platforms with "#SauverLePrésent," press releases and shared articles with taglines come up that describe #SLP as a very diverse advocacy-focused initiative. Indeed, one post reads "Pour #SauverLePrésent, faire équipe, c'est

mieux,"[14] which translates as, "to #savethepresent, working together is best." The press release also explains that the group was inspired by the climate action carried out by the social movements led by NGOs and civil society. Albeit a very small collective, calling itself a "coalition" takes part in highlighting its call for action. *France Culture*'s CO (Interviewee H, 18 June 2020) emphasised the media members' activist motivations in forming this collective. However, none of the involved media could claim to belong to the "social movement media" category. One of our interviewees even stressed the differences that exist between the different news outlets' editorial identities, and how challenging this makes it to decide on a topic in common when some members have a far more "activist" tone than others (Interviewee F, 22 April 2020).

Initiatives permeated by communication practices and strategies

Although very similar to a social movement initiative in its action and organisational model, CCN also takes on a facilitator role for interested journalists covering climate issues. To promote its services, it boasts a "combined audience approaching 2 billion people – and growing."[15] CCN's facilitating role includes providing advice that it offers on its internet site and via its weekly emails, the provision of a library of articles that are free to republish, and organising agenda-set "weeks of coverage." Most of the French members of CCN that were interviewed said that they had taken part, one way or another, in the UN Climate Action Summit week of coverage that was coordinated in September 2019. Some media were more invested than others: *Le Parisien* published a "green issue" (literally green-coloured and predominantly focused on environmental issues), and *Libération* devoted their cover pages to climate-related news during that week. Furthermore, some of the French media in this collective created collaborations between the environment section and the communications office.

Similar to CCN, #SLP stresses emergency in its name by referring to "the present." Linking it to a hashtag is a method shared on social media platforms by both social movements and brands to give more visibility to their posts through keywords. Keywords associated with "trending topics" can give social media posts a lot of momentum on platforms such as Twitter. In practice, each media member works on its own story, which is then shared on social media by the news outlets' official accounts, their communication services' accounts, and the involved journalists' and communication officers' individual accounts. As such, this collective does not have an internet page, relying essentially on the hashtag. According to the interviews led with the different members of this collective, the initial objective was that every member publishes and shares #SLP content on social media in order to gain as much visibility as possible. Nevertheless, several journalist interviewees have reported that they feel they do not have the time or skills to use social media, and have therefore had to be prompted to do so by the collectives' COs. For the collectives' statement to be visible, both journalists and communication officers join forces to promote their coverage of climate change.

Mobilising journalism's most recognised genres

Whilst the collectives utilise a range of communication practices to promote climate change, their work is nevertheless presented under journalism's most established genres. The two French collectives emphasise their use of investigation. As a journalistic genre, investigation combines representations of journalists' capacity to get their hands dirty in order to reveal the truth, and to invest sufficient time, in order to get to the "bottom" of a story, reveal its complexity (Marchetti, 2000, p. 37) and hidden power-driven schemes. In a context in which journalism is facing its strongest criticism yet,[16] showcasing investigations can be seen as a promise to the readership to work for them rather than for investors or other actors in power. #SLP's press releases stress the fact that its members will be tackling the climate emergency by means of "extensive investigations,"[17] despite the fact that none of the media in #SLP are renowned for their investigative work. Nonetheless, since September 2019, its monthly investigations have focused on topics such as air quality in and around schools, ethical fashion, overfishing, and the reduction of waste. These stories concern everyday life topics that develop a link, albeit distant, to climate change. JIEC, which refers to the genre in its name (Investigation Journalists on Environment and Climate) has *Médiapart* amongst its members, France's most successful digital-only media, renowned for its investigative work. Incidentally, it has developed a reputation for investigating topics that may usually be confined to news in brief.[18] So far, one investigation has been led collaboratively which focuses on a categorisation of climate-sceptic actors in France.

JIEC's first productions were not investigations but *reportages* [19] about how people experience climate change first hand, i.e. displaced populations because of climate-induced catastrophes (e.g. floods, fires), the development of climate-related illnesses (e.g. allergies and dengue), and the increasingly difficult conditions for farming. The field work that goes into *reportage,* implying a journalist's time spent on the field seeing and hearing for herself, is what takes part in the genre's prestige (Ruellan, 2007). Humanising climate change stories is also included amongst CCN's instructions for covering climate change. The eight bullet points that characterise "good climate coverage" in the site's "About" column[20] can be summarised as calling for human, explanatory, solutions, visible, opinionated and/or interactive coverage of the topic. Feature articles that dominate the CCN library, making up 42 per cent of its content, generally offer a human-interest perspective. Analysis, Explainer and Q&A categories, that make up almost 20 per cent of the content in the CCN library,[21] belong to the explanatory genre. This is often called for in "solutions journalism," a trend that has been growing in newsrooms around the world since the mid-2000s (Amiel, 2020) and is defined as "reporting about responses to entrenched social problems that examines instances where people, institutions, and communities are working toward solutions," rather than focusing on the problems' negative outcomes (Curry and Hammonds, 2014). Furthermore, in her work, Pauline Amiel shows just how powerful solutions journalism is as a marketing tool (Amiel, 2020).

Over the past five years, climate change has been experiencing growing visibility online, led in part by social movements on social media platforms. The mobilising of both journalism's most noble and most successful genres outside of social media platforms is a way of showcasing what are commonly considered to be quality journalistic practices,[22] as well as ensuring that the content will reach a market. Nevertheless, the sense of urgency that these genres convey does not come from the daily newsroom routine, but instead from the time dedicated to the topic outside of the newsrooms' urgency. In this regard, the emergency of climate change is maintained, and fed by the use of genres that highlight the less visible things in everyday life, and promote journalistic excellence.

Conclusion

The analysis has shown how these three collectives have engaged in communications, activist and journalistic practices and discourses, for a cause that qualifies as urgent by virtue of its name. However, ambiguity is cast as to whether the emergency primarily concerns climate, or the media themselves. But, climate, as an increasingly visible topic online outside of news media coverage, reveals itself as both an opportunity for news media to gain momentum and work on burnishing journalism's tarnished reputation as a watchdog and defender of human rights by putting forth quality journalistic practices and content.

This research opens a few pathways for understanding the current evolutions that environmental news is experiencing. This work suggests that the journalists involved in these collectives have engaged in them for a cause. Indeed, they all make a conscious effort to find the time to come together, regardless of how much they feel they need to negotiate their own media's territory. Furthermore, the younger interviewees all described strong concern for the topic, and expressed the need to develop its legitimacy, which contrasts with Comby's concerns about the institutionalising of the environment as a journalistic topic (Comby, 2017). This could mean that there is a younger generation of journalists, inspired by recent climate-related political and social movement events, who are pushing for better recognition of the topic. However, at no stage could they be mistaken with activists, given that they described specific methods for keeping a professional distance from the subjects they cover. On the other hand, they are far from passive with regards to their media's coverage of climate change. If anything, some of them show such strong commitment to their media outlet's editorial identity that they could be perceived as internalising their media outlet's market logics in the search for successful content, such as, potentially, climate-related news.

Additionally, the collective action of the groups could be interpreted as triggering extra means for the coverage of climate in their respective media outlets. It was reported that since COP 21 occurred in France in 2015 and the climate movements expanded in 2018, French media outlets have increasingly been investing in climate news. For example, one newspaper is about to employ another journalist to join a team of four environmental journalists, another

media outlet has seen the creation of a weekly double-page focused on environment, and ultimately joining a collective of media outlets focused on the topic has generally been welcomed positively by editors-in-chief. Nevertheless, interviewees also stress the fact that they are still confronted with tough negotiations when it comes to giving the topic more visibility in the breaking-news columns. However engaged individual journalists may be in covering climate as an emergency, what this mixed investment across media shows is that climate change is currently more of a market-based opportunity to address other emergencies that the media industry and the journalistic profession are confronted with, such as their own financial viability and the perceived trustworthiness of journalism as a profession in today's society.

Acknowledgements

Notes

1 Sciences de l'information is a French Human and Social Sciences discipline that fosters an interdisciplinary approach to media.
2 Tunstall distinguishes "circulation," "advertising," "mixed," "non-revenue" and "prestige" goals to characterise the motives underlying the hierarchy of news (1996).
3 In French, the word "urgence" encompasses both "urgency," as a persisting priority, and "emergency," as posing immediate risk. These two English words allow us to distinguish "routinised" urgency in the newsroom, from the emergency a topic may have been attributed outside the newsroom.
4 These communication officers are in charge of promoting a media's brand and activities.
5 Although proximity is growing between the communications services and newsrooms (Pailliart, Salles and Schmitt, 2017), these offices are traditionally distant from each other in the premises of the media, sometimes located on different floors, making casual interacting quite impossible.
6 Grassroots.
7 https://up-magazine.info/about/, consulted on 7 June 2020.
8 https://up-magazine.info/about/, consulted on 7 June 2020.
9 https://jiec.fr/?page_id=22, consulted on 27 May 2020.
10 https://www.coveringclimatenow.org/, consulted on 27 May 2020.
11 https://www.coveringclimatenow.org/, consulted on 27 May 2020.
12 These require including a tagline that identifies the original source of content as well as CNN as being the initiator, adding a CCN logo, and republishing the content on social media with CCN identifications such as "#CCN" and "@CoveringClimate". Specific guidelines apply for three partners, *The Guardian*, Reuters and *HuffPost*, and require that anybody republishing read their licensing agreements. Further republishing guidelines allow for small-scale changes to the articles: headlines as long they respect the original meaning without introducing "new spin or agenda," grammar,

spelling, localisation details and time markers. Last but not least, articles may be translated as long as the translated version is also shared for republishing.

13 https://www.influencewatch.org/non-profit/schumann-center-for-media-and-democracy-inc/, consulted 7 June 2020.

14 https://www.facebook.com/UsbekEtRica/posts/2639969082713329/, consulted on 11 June 2020.

15 https://www.coveringclimatenow.org/, consulted on 12 June 2020.

16 The decline of trust in media all around the world is one of the main findings pointed out in the 2019 Reuters Digital News Report.

17 https://twitter.com/USBEKetRICA/status/1267430096501125120/photo/1, consulted on 2 June 2020.

18 In November 2019, an investigation focused on French actress Adele Haenel's experience of sexual assault by a French movie director when she was underage. *Médiapart*'s articles and videos on the topic went viral.

19 *Reportage* is classified as a narrative journalistic genre in French journalism manuals (Agnès, 2002, p. 191), as opposed to fact-driven or opinion genres. It is characterised by the journalist's time in the field, allowing them to report their own lived experiences. The privilege of being in a position to tell the news stories makes it a genre that is considered one of the most prestigious (Ruellan, 2007).

20 https://www.coveringclimatenow.org/about, consulted on 27 May 2020.

21 Feature (42 per cent), News (17 per cent) and op/ed (14 per cent) come first.

22 In his research focusing on French journalists' representations of the media coverage of the yellow vest movement, Alexandre Joux (2019) highlights the strong tension between what are considered to be quality journalistic practices, that require time and reflection, and market-driven practices, that are mainly led on social media platforms, and that require less distancing and analysis of the covered topic.

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4 Climate change news in Spanish-language social media videos

Format, content, and temporality

Leonor Solís-Rojas

Introduction

News formats have been in constant transformation before and along with the emergence of social media. In the last decade, native formats have emerged such as *social media video news*, which respond to the audiovisual needs and temporalities of social media platforms. Where the attention of audiences has become a scarce resource, the imperative to capture users' engagement in the shortest time possible has become a rule (Goldhaber, 1997; Davenport & Beck, 2001, Groot Kormelink & Costera Meijer, 2020). The first objective of this chapter is to evaluate the social media video news format through a focus on its embedded temporalities within an attention economy. To this end, I draw upon theoretical and methodological research on the attention economy and "clickbait" strategies (Lorenz-Spreen et al., 2019; Palau-Sampio, 2016; Bazaco & Redondo, 2019). Following from this analysis of format, I examine content more concretely and assess how climate change is represented in Spanish-language social media news videos, in terms of the issue themes as well as the spatial and temporal frameworks. The second objective of this chapter, therefore, is to understand how the temporal logics of social media video news translate the very different temporalities of the climate crisis and moreover, how this is done in Spanish-language media—a focus often sidelined by the predominant focus on English-language outlets in the field of environmental communication. Ultimately, this chapter assesses how the temporal translation between platform and content impacts the depth and quality of climate reporting in this popular, yet understudied, news format.

News media and social media: novel news formats

Journalism has played a fundamental role in communicating climate change. Some researchers recognize that society acquires information on this subject mainly through the media (Schäfer & Schilichting, 2014; Painter, Kristiansen, & Shäfer, 2018, p. 1). It is, arguably, the media that largely shape public perception of this issue, and they can either inhibit or strengthen the interaction between science and society (Sampei & Aoyagi-Usui, 2009; O'Neill et al., 2015).

Social media platforms have profoundly changed the way the general public—particularly young audiences—seek and consume information online (Painter, Kristiansen, & Shäfer, 2018; Reuters Institute, 2020). Half of the global population gathers information from the media through social media platforms, with Facebook being the most important platform for news media consumption at the global level (Newman et al., 2017, 2018, 2019, 2020). The interaction between the news media and social media platforms in recent years has had profound effects on the communication patterns of contemporary society. This has partly meant increased interaction between the news media and the audiences and for public debate (Pearce et al., 2018, p. 1). Some researchers believe that social media provide an opportunity to inform, sensitize, and engage audiences with pressing issues such as climate change (Moser, 2016; Anderson, 2017; O'Neill, 2017; Segerberg, 2017). In contrast, however, social media platforms have also been linked to echo chambers, polarization, and misinformation (Williams et al., 2015; Pearce et al., 2018).

Media coverage of climate change has been studied for almost two decades (Boykoff, 2011; Schäfer & Schilichting, 2014; Schäfer, 2015). It has, however, not been until recently that the role played by digital native media—media organizations that were born or started entirely in the digital world and are not mere digital extensions of newspapers or broadcasters—has been analyzed (Brock, 2013). Studies have shown that these media have a wider coverage of climate change than legacy media, given the interest of young audiences in the environment (Painter et al., 2016; Painter, Kristiansen, & Schäfer, 2018). Studies have also found evidence of innovative, successful strategies to communicate in the digital context, including the so-called *social media video news*—news in video format specifically conceived for broadcast on social media platforms and mobile devices. The rise of online video is an outstanding element that will account for 82 percent of internet traffic by 2022 (Barnett, 2019) and has already been recognized as the format with the highest audience engagement, with 65 percent more interactions than still images (Blasco, 2020; Brandwatch, 2020).

Pearce et al. (2018) in their review of climate change social media research, pointed out in their conclusions that there is an information gap in visual communication and alternative social media platforms to Twitter. For this reason, this paper focuses on the Facebook platform and little researched visual formats such as social video news, to contribute to this area of knowledge in development.

Temporal format characteristics of video news on social media

The interaction between social media platforms and news media outlets take place in a digital space-time context that can be conceived as an extension of the individual through the use of smartphones and an expansion of our spatial and temporal capacities (Van Dijck, Poell & De Waal, 2018). From the access-to-information standpoint, mobile devices have given people immediate access to a wide range of content from different media, blurring geopolitical boundaries of information. It is possible nowadays to receive news uninterruptedly and at the exact moment it happens from any part of the world through various local or

global media, as part of the platform society (Van Dijck, Poell & De Waal, 2018). This ability to receive news constantly is, at the same time, limited by the fast pace of urban life, which is making one's attention a scarce resource. This has transformed the temporal characteristics of news content, which is now being ruled by the so-called *attention economy* (Goldhaber, 1997; Davenport & Beck, 2001).

The attention economy

The *attention economy* is a term encompassing the various ways in which media compete for the attention of audiences (Davenport & Beck, 2001), capture people's interest, and grab their little time available (Goldhaber, 1997; Davenport & Beck, 2001). For these purposes, various features of the use of news are measured including its selection, the time spent reading it, and the way media meet the temporal needs of the audience both at the information and the experience level. However, the time spent on news does not reflect the quality of attention as there are users who can quickly review digital environments and find new, relevant information in a short time (Groot Kormelink & Costera Meijer, 2020). For this reason, the news formats have evolved to make brevity one of its current key features.

Lorenz-Spreen et al. (2019) analyzed the accelerating dynamics of collective attention to identify temporal trajectories in the intervals of attention to news; they found that the capacity of collective attention has narrowed and news content is increasingly shorter, resulting in a more rapid exhaustion of limited attention resources. Microsoft (2015) published a report on the attention span of consumers showing that it was 12 seconds in the year 2000 but it had shrunk to just eight seconds by 2013. This means that the media have only eight seconds to capture the audience's attention (Microsoft, 2015). The company Charbeat (2013), a service that analyses audiences of global publishers, pointed out that a news reader spends 60 to 90 seconds on average *browsing* news articles and might spend over three minutes *reading* longer articles when they are of interest.

Studies carried out by Groot Kormelink and Costera Meijer (Costera Meijer & Groot Kormelink 2015; Groot Kormelink & Costera Meijer, 2017, 2018, 2020) have shown that it is necessary to provide news that allow simultaneous but different practices: prior to the *click*, including the so-called *checking, monitoring, scanning*, and *snacking* (Costera Meijer & Groot Kormelink 2015), the *click*, its full reading, and its sharing (Kümpel et al., 2015). The temporal characteristics of video news should be considered as part of a strategy to maximize both the time that people devote to the story and the benefits they might get from it so that they decide to share it with their contact networks (Kümpel et al. 2015; Groot Kormelink & Costera Meijer, 2020).

The *attention market*, characterized by an overabundance of information and the shrinkage of the attention span, has made way for more content linked to emotions; and emotional content is the most consumed by users (Webster, 2014; Serrano-Puche, 2016). The emotional awakening or arousing of audiences denotes the intensity of the emotional response and can be either

positive or negative (Alhabash & Ma, 2017). This intense emotional tone constitutes a stimulus that, in addition to drawing attention, drives the desire to share the content (Berger, 2012). Audience arousal can be elicited by the *clickbait* phenomenon.

Clickbait features in social news

Clickbait is a digital media strategy that seeks to draw attention through headlines (Bazaco & Redondo, 2019). Unlike traditional news headlines, some digital native media utilize baits that appeal to curiosity, humor, or emotions. This practice was widely exploited by the tabloid press in the past and has now been made profitable by digital native media. The headline is a central element at the first-reading level and a decisive criterion for information selection. Although *clickbait* headlines have been used predominantly in less reliable articles, traditional news media have also adopted this technique to attract readers, disseminate their content more widely, and expand their audiences on social network platforms. *Clickbait* strategies can be analyzed through headline features such as: orality marks, interaction with the audience, incomplete information, word games, and exaggeration (Palau-Sampio, 2016).

Temporality strategies—stemming from the attention economy—used by the social media video news format to attract audiences to social media content, can be analyzed in terms of three variables: (1) Eight seconds to grab the audience's attention; (2) a maximum of three minutes, on average, that the reader devotes to the full content; and (3) the presence of *clickbait* features in headlines.

Temporalities and deadlines of climate change in social media video content

The IPCC Special Report on global warming of 1.5°C (SR15) was published by the IPCC in October 2018 and concluded that the global temperature is likely to reach 1.5°C above pre-industrial levels if the current warming rate continues between 2030 and 2052 (IPCC, 2018). Some news headlines interpreted this as a 12-year term for the world to avoid catastrophic climate change, in other words, that the world has a limited time to act decisively to address rising temperatures (Asayama et al., 2019). Some researchers pointed out the risks of setting deadlines when communicating climate change; these include the adverse impact on the credibility and accuracy of science for the audience in case the catastrophe does not occur at the time given (Asayama et al., 2019; Boykoff & Pearman, 2019). Therefore, the temporal angle of climate change communication plays a key role, something that deserves careful consideration.

Temporal, geographical, and theme frameworks in Facebook social video news

Climate change news can be framed in different ways. Framing denotes the way an issue is presented to highlight specific aspects (Entman, 1993;

Wardekker & Lorenz, 2019). News framing can be either intentional or unintentional and reflects the way the reporter perceives or appreciates the issue (Schön & Rein, 1994). For this study I adopted the general concept of framing as used by Wardekker and Lorenz (2019).

Although news framing can be analyzed from a number of perspectives, this study focuses on the issue, spatial and temporal framing (O'Neill et al., 2015; Painter et al., 2018; Wardekker & Lorenz, 2019). Wardekker and Lorenz (2019) analyzed the temporal framing of the visual contents used by the IPCC working group II in its reports. Wardekker and Lorenz (2019, p. 6) write:

> Whether visuals frame climate change as something in the here and now, near future or past, versus the distant future or past, also affects people's perspectives of their personal efficacy, the extent to which current versus future generations will be affected and the level of urgency for action.

O'Neill et al. (2013) considered the use of spatial and temporal *distancing* as a key framing element in the portrayal of climate change. The author found that the media present climate change as a phenomenon removed from the present, from the here and now, which adds to spatial distancing: it is "something" that happens "somewhere," instead of presenting it as a problem that occurs locally (O'Neill et al., 2013; O'Neill, 2017). Confirming this time framing, Wardekker and Lorenz (2019, p. 1) recently found that "visuals are largely framed as distant in time and space and predominantly portray the threats of climate change rather than the possible goals to be achieved."

2030–2052 time limits in climate change video news

Boykoff and Pearman (2019) analyzed the emphasis made by the media, since the publication of SR15, on 2030 as the time limit for addressing the challenges posed by climate change, and on the urgency of taking action as expressed in phrases that resort to emotional formulas e.g., "there is little time left for action." The authors suggested that one year after the SR15 was released, the 2030 time-limit discourses might have had beneficial effects by galvanizing action and generating short-term plans. However, such language can also induce fear and disengagement; that is, emotional appeals can have contradictory effects on climate change communication. On the one hand, they can be an effective way to reach traditionally unreceptive audiences; however, fear-based communication can also elicit disinterest and unintended denial or apathy (Boykoff & Pearman, 2019). It is, therefore, necessary to analyze the temporal framing of video news since the publication of the SR15 report.

Methods

This study examined media in the Spanish language, the fourth most widely spoken language in the world (Ethnologue, 2019), and the third most popular one on the

internet, after English and Chinese (Statista, 2019). Reviews of climate change communication show that most studies have been carried out in Anglo-Saxon and European countries, whereas publications on climate change communication in Spanish are scarce (Schäfer & Schlichting, 2014; Segerberg 2017; Pearce et al. 2018). I chose to look at Facebook because it has the largest number of active users per month globally, with a total of 2,498 million (Statista, 2019). In addition, Facebook has been recognized as the social network most widely used for gathering news in recent years (Newman et al., 2016, 2017, 2018, 2019, 2020). Globally, 36 percent of people who read news on social media use Facebook for this purpose (Statista, 2019). Also as I mentioned before it is a poorly studied platform.

Media selection

The analysis focused on four digital-born media players whose main format is *video news*. The second inclusion criterion was that the media have at least one million followers. The first two media selected were *Cultura Colectiva* (its translation means Collective Culture, from Mexico) with 23.4 million followers only on Facebook, and *PlayGround Magazine* (from Spain) with 16.6 million followers on Facebook and a cumulative total of 40 million followers across all its social network channels (Chamhaji, 2019). The number of followers of these digital native media quadruple that of the newspaper *El País*, the most prestigious traditional medium in the Spanish language, which had 5.1 million followers as of April 2020. In addition, the Spanish versions of two global digital-born media players were also selected: *AJ+ Español* (Al Jazeera Qtar) and *NowThis News Español* (USA), for their relevance and international recognition in the *video news* format (Kalogeropoulos et al., 2016; Kalogeropoulos and Kleis Nielsen, 2018). Both channels maintain various language versions but their primary one is the English version: *Aj+* has 11 million followers and *NowThi*s has 15 million on Facebook. The Spanish versions of these media have 4 million and 1.5 million followers, respectively.

Video selection

Videos containing the terms "climate change" or "climate crisis" in either the headline or the content were selected. The temporal scope of the analysis ran from the publication of the IPCC report (October 2018) to December 2019. In order for the samples to be equivalent and comparable, 15-video sub-samples for each medium were extracted, for a total sample of 60 videos. As climate change coverage is very low—it accounts for less than 1 percent of the total number of publications—it was not possible to obtain a larger sample.

Content analysis

I first examined the temporal aspects of the social media video news format to examine if the format is indeed ruled by the logics of an attention economy. I

therefore identified: (1) average length of each video; (2) if the time in which the first sentence is expressed is between the first 6–8 seconds of each video, which have been shown to be the limit to capture the audience's attention; (3) and if the video has the presence of *clickbait* features in the headlines, following Palau-Sampio (2016) and Bazaco and Redondo (2019), who identify such features based on the orality and interaction with the audience, lexicon and word play, morphosyntax and exaggeration.

Later, to analyze the themes and frames of the video content, I based my secondary content analysis on the themes and frames identified by previous research. The selection of climate change themes drew upon the work of O'Neill et al. (2015) where they analyzed broadcast, print and twitter coverage of the IPCC Fifth Assessment Report. These themes were later adapted by Painter, Kristiansen, and Schäfer (2018), to analyze digital-born media outlets—and I use this adaption in my analysis and include one more theme for videos focusing on audience actions. After sampling articles, I therefore grouped the selection according to the following 14 themes: Scientific background, negotiations, disasters or impacts, renewable energy, opportunities, climate justice, economic, health impacts, food security, migration, civil society protest, uncertainty, morality and ethics, individual or collective actions. I then determined the spatial and temporal frames of each article based on the temporal frames proposed by Wardekker and Lorenz, discussed above (2019).

All the videos were manually coded based on these predetermined themes and temporal and spatial frames. The videos were coded by two coders who were trained for several weeks. Preliminary tests were carried out and their results compared. Based on the results, a code book was compiled. The Cohen's Kappa viability test yielded a concordance value of 0.82. The data and information compiled were analyzed quantitatively and a chi-square test was used to evaluate the relationships between issue themes and temporal/spatial frames.

Results and discussion

Temporality of social media news videos: evidence of an attention economy

The temporalities of news videos were analyzed in terms of two variables that stem from the logics of an attention economy: the total length of the video and the time taken to present the first idea, which is the bait for alluring the audience to review the content. The overall average length of the videos was 2:43 minutes; the average length for the different media analyzed can be seen in Figure 4.1 below.

Over one third (37 percent) of the videos had a length between 2:30 and 3:30 min; 28 percent between 30 secs and 1:30 min; 13 percent between 3:30 and 4:30 min; 12 percent between 1:30 and 2:30 min; and 5 percent of all the videos lasted between 4:30 and 5:30 min or longer than 5:30 minutes (Figure 4.1).

The Al Jazeera *AJ+* channel had the shortest videos, with an average length of less than two minutes, while the average duration for the other
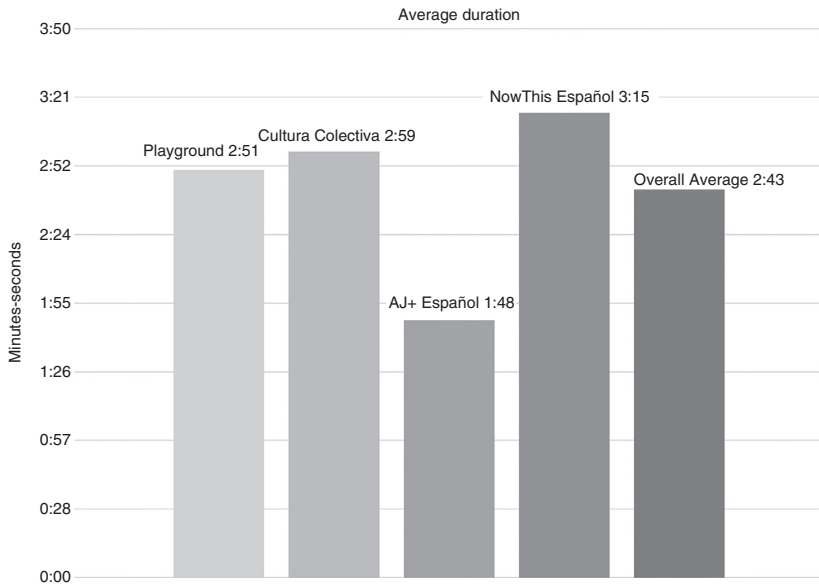
Figure 4.1 Average length of the videos from each media, and overall average length.
Source: Compiled by the author.

media was three minutes. This is consistent with the results of Charbeat on the longest time that people devote to watch or read a full piece of news on social media.

Figure 4.2 shows that videos from both *PlayGround* and *NowThis* Español were the most variable ones in terms of length, compared to those from *Cultura Colectiva* and AJ+ Español, which showed a well-defined duration.

The presence of clickbait characteristics to capture and arouse the audience's attention in the first sentence of the content was 81 percent—measured by the time in seconds in which the first sentence was presented. The overall average of time in which the first sentence is expressed was seven seconds. Again, *AJ+ Español* showed a slight difference from the other media as its average activation time was 6 seconds. However, the overall average time for all the media is consistent with the conclusion reached by Microsoft (2015) that it takes six to eight seconds to capture the audience's attention. This result did not show significant variations.

Clickbait features

All the videos examined exhibit clickbait features in their headlines; it was usually not one single feature, but a combination of the three indicators considered. The features most frequently used were orality and interaction with the reader (70 percent), exaggeration (68 percent), simple structures (45 percent),
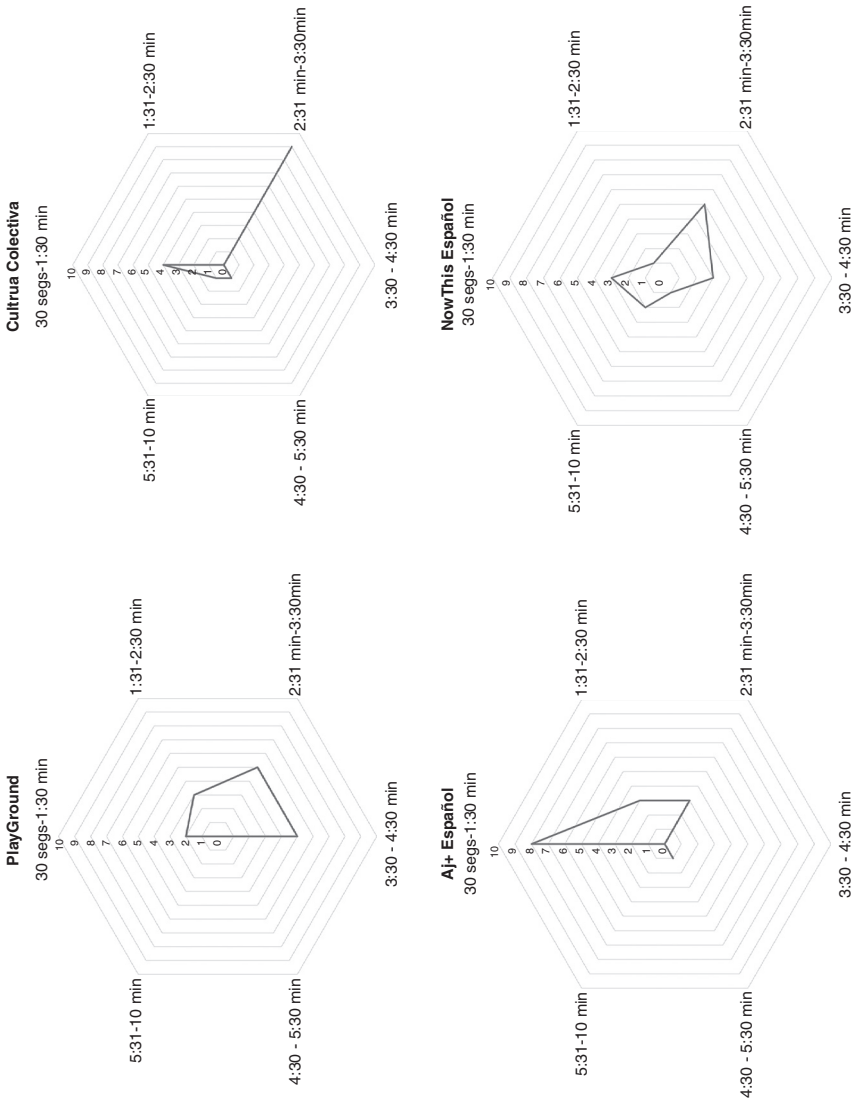
Figure 4.2 Length distribution of videos from different media. Most videos last between 30 and 90 seconds or between 2'30" and 3'30".
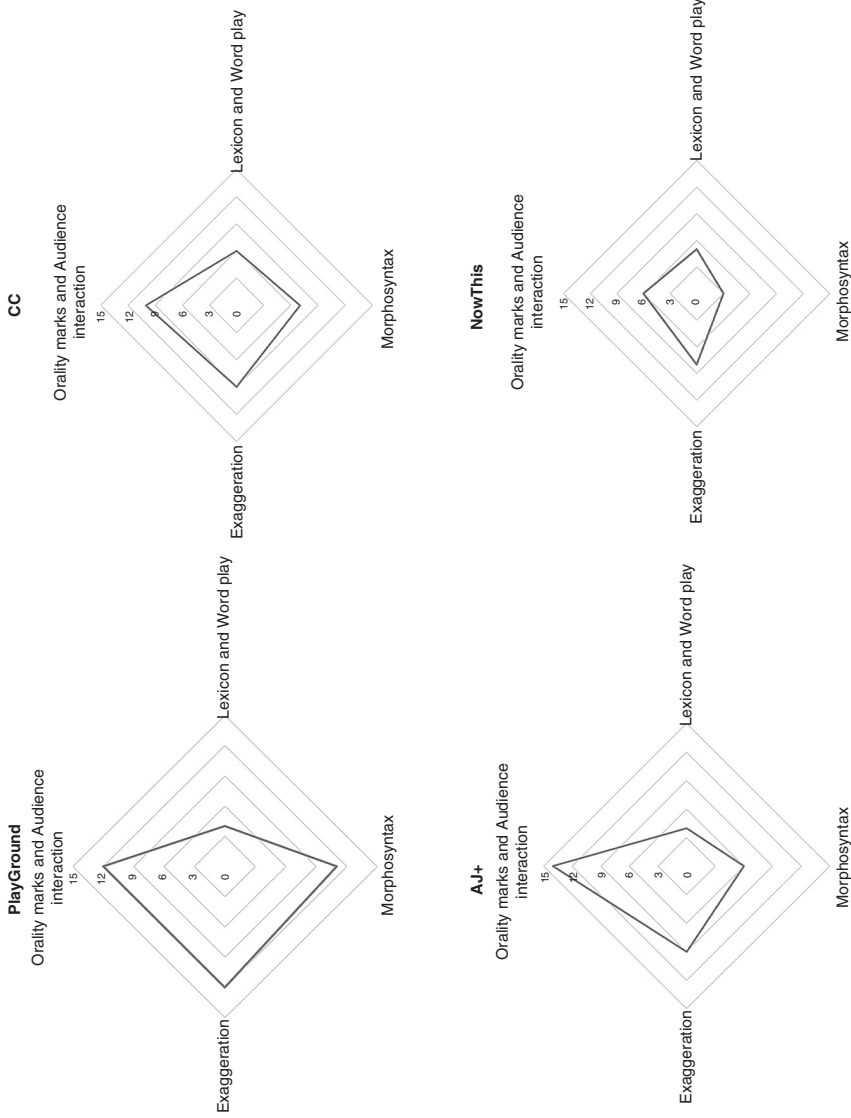Source: Compiled by the author.

Figure 4.3 Presence of *clickbait* features in headlines from the different media analyzed. Source: Compiled by the author.
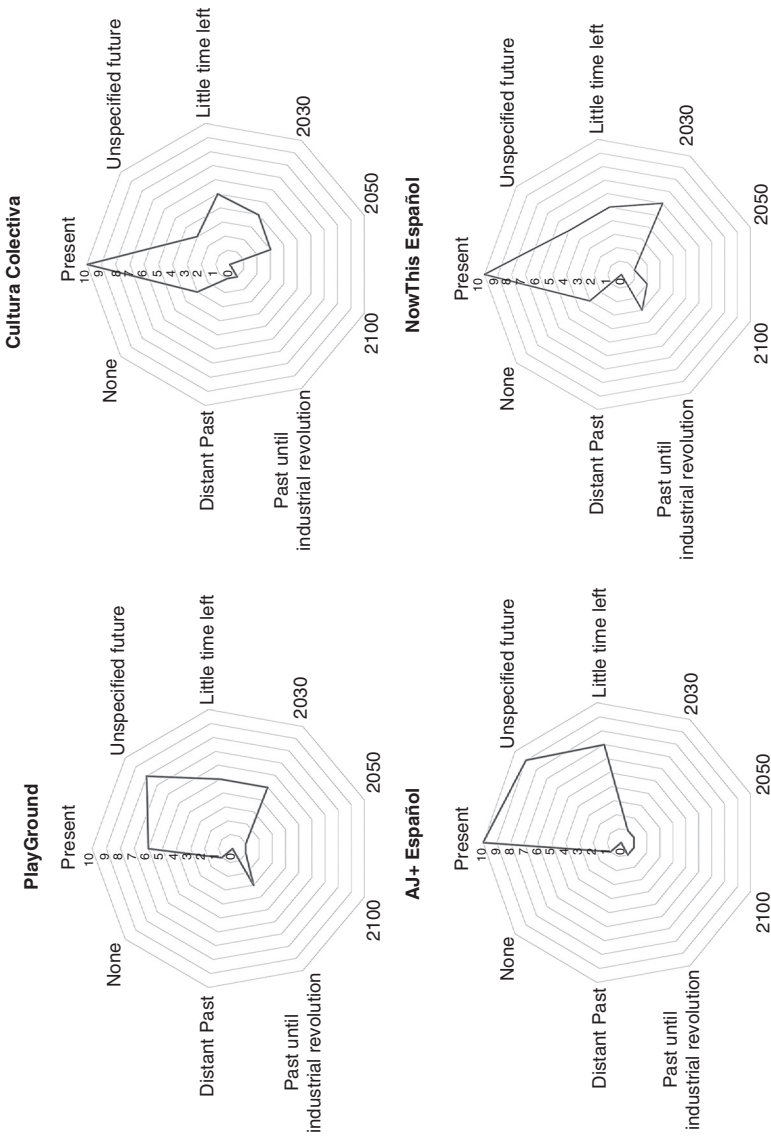
Figure 4.4 Timeframes used in the videos examined for each media and overall average for all the media examined. Source: Compiled by the author.
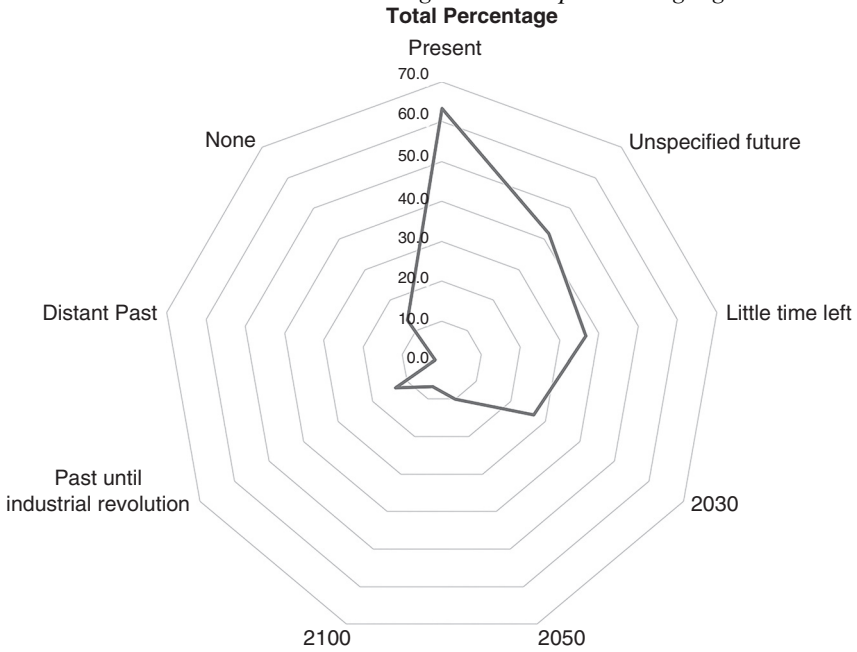
Total Percentage

Figure 4.4 (Cont.)

and word plays (30 percent). Figure 4.3 shows the number of times each indicator was used in all the videos analyzed.

Climate change and temporal frames in social media videos

I examined the way in which climate change was temporally framed in the videos, as either an immediate or a distant issue, and how video news reflect—or does not reflect—the influence of time limits set from the SR15 report. I found that 30 percent of the videos examined are framed in the present emphasizing the consequences and impacts as they occur; 18.3 percent of the videos lack an explicit temporal focus; 16.7 percent make reference to an unspecified future, with an abstract temporality; 10 percent frame the issue within the rhetoric of emergency, that is, "we have little time" and "the urgency to act"; 10 percent mention 2030 as the "deadline"; 6.5 percent mention measures that have to be taken by 2050; 3.3 percent mention measures towards the year 2100; and another 3.3 percent make reference to the 19th century either to frame the issue mentioning scientific advances that allowed to know the phenomenon of the climatic change such as the discovery of greenhouse gases. Finally, 1.7 percent of the videos mention the 2030–2050 period, as literally stated by the IPCC SR15, not as a 12-year deadline but as a timeframe (Figure 4.4).

The results show a difference from Wardekker and Lorenz (2019) who found a uniform distribution among the different time categories and a higher proportion in the long-term 2100 images in the visuals of impacts and adaptation IPCC assessment reports. While our study found a higher proportion of cases with present impacts and secondly the mention of 2030 as the time limit. Some of the expressions used in the videos were the following: "There is less and less time left" (PlayGround), "The world is running out of time" "We have until 2030 to stop climate change" (Collective Culture), "Cocoa trees will be extinct by 2050" (NowThis English); "Today we are facing a disaster on a global scale," "Time is running out" (AJ+ English).

It seems safe to say that, unlike previous analyses (e.g. O'Neill et al., 2013), social video news no longer utilize temporal distancing when describing climate change issues; on the contrary, by adding the five corresponding categories from the present to 2050, 58.2 percent of the videos talk about it as a here and now issue and about the urgency of taking action in the short term, or mention that "there is little time left," stating specific dates within the 2030–2050 period. Nevertheless, 35 percent of the videos do not mention any timeframe or do so in ambiguous terms, making reference to the future but without stating specific time intervals. This type of content utilizes the temporal distancing that O'Neill et al. (2013) describe as one in which audiences do not perceive the issue as temporally close.

Themes

Overall, 35 percent of the videos examined focused on disasters or the impacts of climate change; 31.6 percent focused on protest and activism, particularly with Greta Thunberg and other young activists as protagonists as youth climate strikes was a phenomenon especially prominent in the period of analysis; 8.3 percent talked about food security, with an emphasis on the risks for globally important drinks such as coffee and beer or focusing on reducing meat consumption and vegan alternatives; 6.7 percent of the videos talked about opportunities and alternatives that are being experimented with, in particular for storing CO_2 in the oceans and rock structures, and about the role of science; 5 percent described examples of actions that civil society can take; 3 percent talked about the international negotiations on climate change; and 1.7 percent. of the videos described migration and how climate change affects people's security and also their health (Figure 4.5).

Painter et al. (2018) and O'Neill et al. (2015) also found disasters among the themes most frequently addressed in TV broadcasts, print news media, digital-born media outlets, and Twitter. However, unlike our findings, those studies (which were carried out in the context of Conferences of the Parties or the publication of IPCC reports) found issues such as climate change negotiations and climate justice to differ with a lower frequency with respect to the above-mentioned previous studies that were conducted in the context of the COPs or the publication of specific IPCC reports.
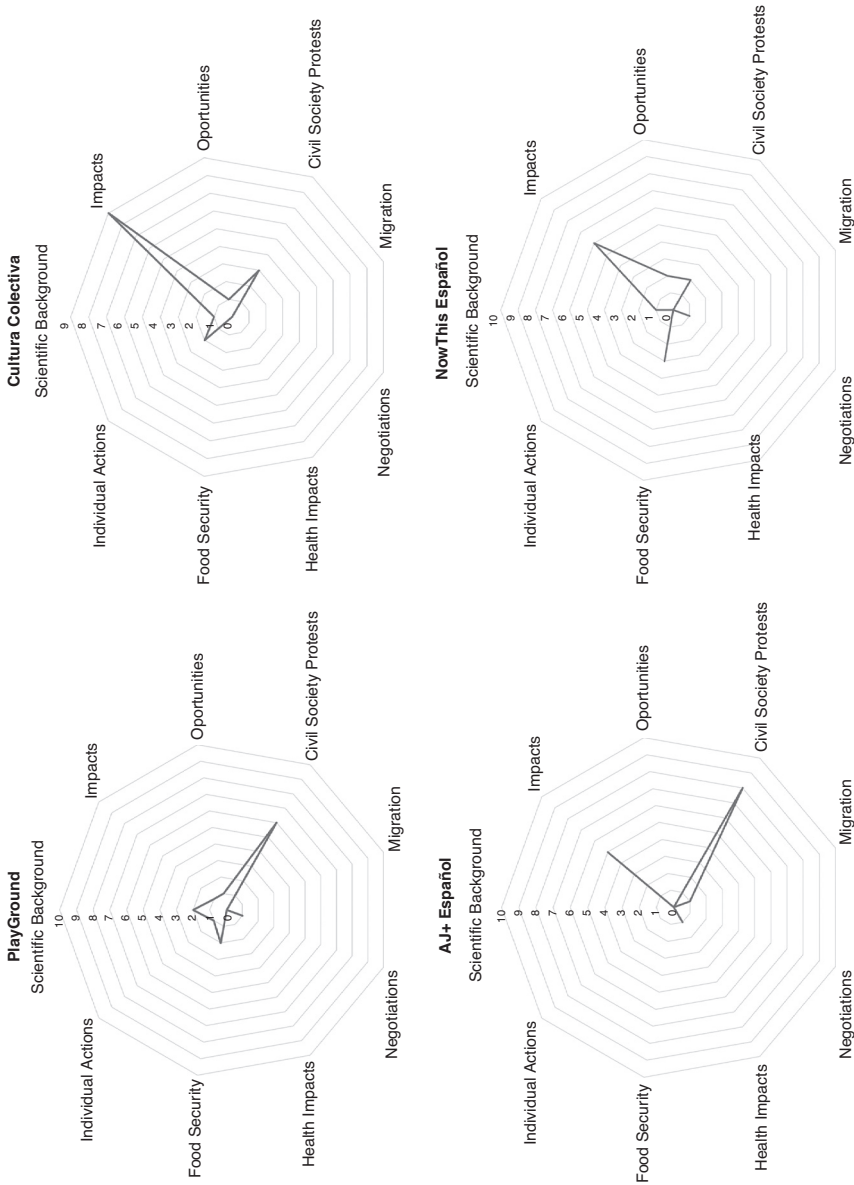
Figure 4.5 Themes of the video news for each media and as a percentage of the total sample. Source: Compiled by the author.
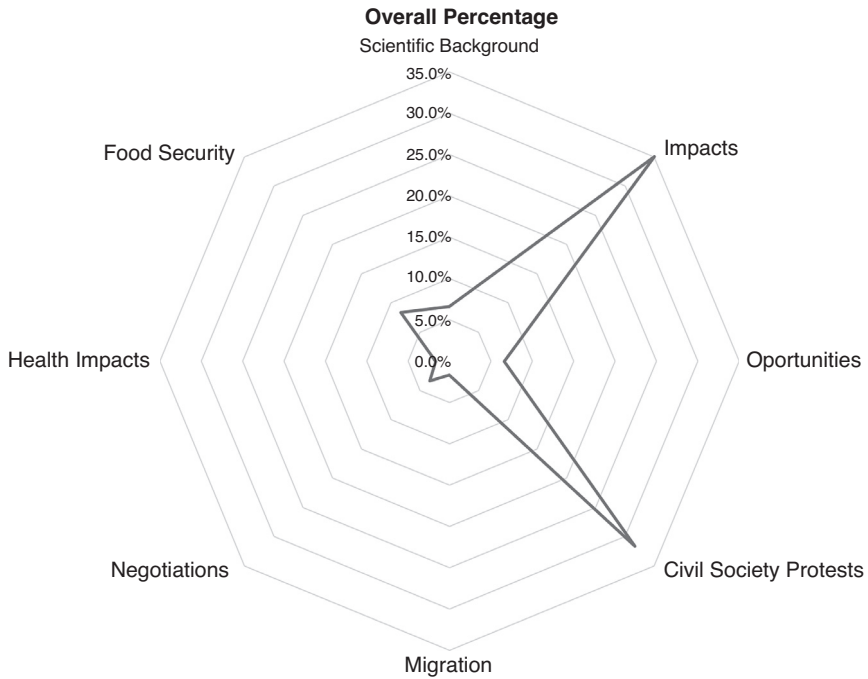
Overall Percentage

Figure 4.5 (Cont.)

Some of the topics that were found in this study are not present in previous studies and they represent sectors or themes previously suggested by academic literature of climate change such as: a greater presence of scientists (38 percent) and local populations (30 percent). It also appears to be new that some pieces contained wildlife as the main characters in the video narrative, such as kangaroos, koalas, armadillos, or Arctic dogs as victims (18 percent). It was necessary to include as a new theme, "personal actions," since a considerable number of videos were focused on the topic of how individuals can make a difference. Other videos also presented themes that Painter and Osaka (2019) found in terms of coverage of climate change through the theme of "everyday lives, experiences, and passions of audiences" related to food—like new vegan alternatives, and the effects and threats that can occur with the cultivation of important beverages for human consumption such as coffee, or beer.

The chi-square test revealed a significant relationship between the subject theme of the videos and their temporal focus ($\chi^2_{64} = 83.7$ $P < 0.05$). This suggests that the subject theme influences the temporal focus of the video. For instance, videos dealing with activism contained statements like "there is little time left"; the 2030–3050 deadline is present in videos discussing alternatives. The results show that 40 percent of the impact videos are related with direct impacts that are occurring in the present in different parts of the world, such
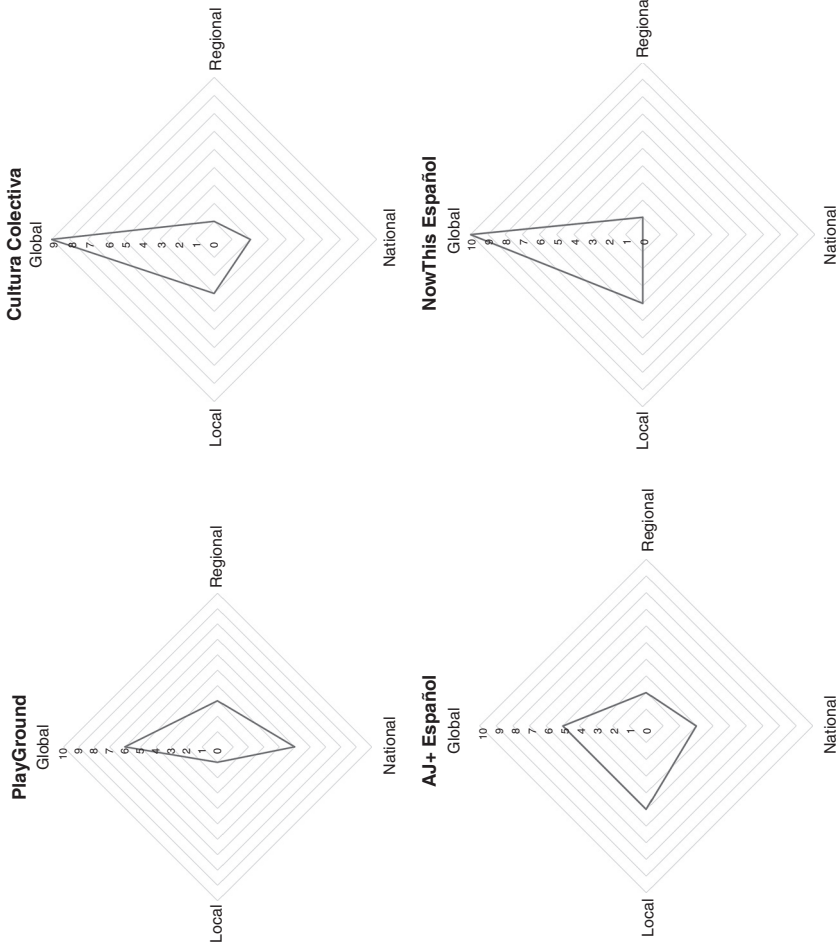
Figure 4.6 Spatial scale of the videos from each medium and overall percentage for the total sample. Source: Compiled by the author.
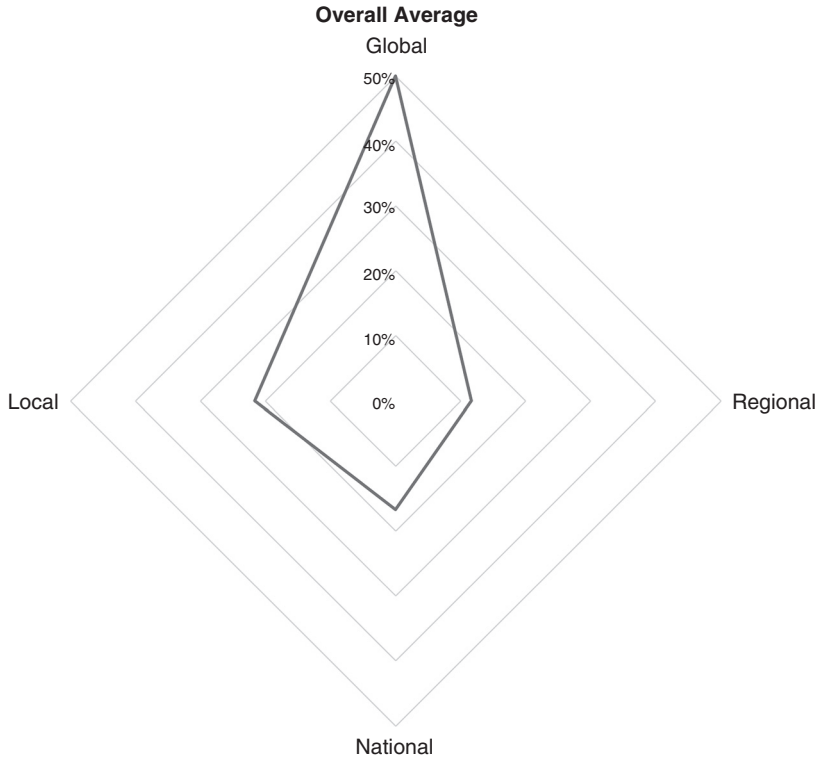
Overall Average

Figure 4.6 (Cont.)

as wildfires in Australia and the Amazon, ice melting in the arctic, fisheries, etc.; 18 percent were related to the IPCC reports. However, the limited scope of our study does not allow delving further into a more detailed relationship between the themes and their temporal features.

News addressing activism was the second most frequent theme, which is largely explained by the period analyzed and the prominence that the youth movement for climate had throughout 2019. In the case of protests the results (31.6 percent) are similar to the findings of Painter et al. (25.8 percent). However, it is important to emphasize that there are differences in the specifications within the themes that appeared between the period 2018–2019 such as: underage activists that are part of the Youth Climate Strike movement and outstanding female characters such as Greta Thunberg. In fact, Greta Thunberg dominated the media, even though a couple of videos portrayed other activists from the global #FridaysForFuture movement in the United States, including Ishra Hisri who addresses the issue of diversity in climate activism. Although the presence of these characters is new with respect to previous studies, and are characteristic of the particular period analyzed, the youth

activism taking place in Latin America and Spain was not addressed in any of the videos examined. This was surprising considering that I analyzed Spanish-language media.

I also identified a few characters and issues that had not been mentioned in previous studies, like Greta Thunberg or Alexandra Ocasio-Cortez, in the negotiations theme; for instance, some videos alluded to the anti-natalist option and movements for women and men who have decided not to have children in response to the coming climate breakdown—an emergent topic that has not been studied in other media analyses. Another issue I found is the occurrence of psychological illnesses, such as the so-called "eco-anxiety," that are becoming visible among the Millennial and Gen Z cohorts. These themes are emerging and had not been identified in media coverage analyses conducted in the last decades (Boykoff, 2011; Schäfer, 2015; Painter et al., 2016; Painter et al., 2018).

Some video shots were repetitive and shared by all the media analyzed, including some of the most prominent testimonials on Greta Thunberg's activism. I also identified some particular topics and approaches with unusual or novel coverage; these include biographies of women scientists not recognized in their time, young women scientists working on climate change research, moving testimonials of local residents describing the direct consequences of climate change, social projects by NGOs or individual actions that civil society is carrying out in different countries. These themes can act as triggers to bring young audiences closer to the issue. However, the video news examined did not delve into the themes, usually did not compare or contrast issues, and were not complex engagements with multiple viewpoints or analyses. However, as Groot-Kormelink and Costera Meijer (2020) point out, such materials arouse interest, are concrete, inform the general public, and allow them to learn about the subject matter and discuss it with their contact networks, complementing it with other information (Groot-Kormelink & Costera Meijer, 2020).

Spatial frame

Half of the videos had a global scope, 22 percent had a local scale, 17 percent a national scale, and 12 percent had a regional scale (Figure 4.6). No significant relationship was found between the spatial and temporal scales (χ^2_{24} = 30.9 $P>$ 0.05).

The local scale was the second most represented in the set of video news analyzed. Previous studies on climate change coverage point out the importance of presenting local news to avoid the perception of geographic distancing from the issue. Only one of the videos talked about a Latin American country, Bolivia; most of the local news were from European countries, only two were from Australia and Morocco. The same happened at the national scale, only one news story talked about Mexico. Most news pieces were located in the USA, England, Japan, and Uganda. All the regional news is related to the Arctic and Europe. Only 3 percent of the 60 videos examined made geographical reference to the Spanish-speaking region. This conveys a

geographical distancing from the subject and shows that the social media news videos under analysis were not trying to develop and cover climate change issues specific for the regions to which their audiences belong.

Format and content: temporal characteristics of social media video news on climate change

The purpose of this chapter was to explore how the format and content of social media video news shapes coverage of climate change. One of the objectives of this study, therefore, was to examine how the temporal logics of an attention economy influences the format of social media video news. Overall, I found that digital-born media outlets use clickbait strategies in their headlines and first sentences of videos as a strategy for the emotional arousal of audiences. The clickbait is related to the emotion of the audiences, because it requires capturing the attention in the shortest time possible, to do so it uses emotional resources. This strategy is likely to be effective in attracting new audiences, but it may also affect audience alarmism. Further studies are needed to evaluate the effect of using clickbait resources, arousal features and its effects, both positive and negative, on audience sentiment; these features strongly appeal to the audience's emotions to attract them to the content; this can, however, also lead to a paralysis in audiences (O´Neill & Nicholson-Cole, 2009; Boykoff & Pearman, 2019; Hulme, 2020).

The second objective of this chapter was to assess how the temporal logics of social media video news shape the themes and frames of climate coverage. I found that the issues covered by social media video news largely coincide with those previously found in other studies on traditional print media and digital native media in text format or through social media such as Twitter (O'Neill et al., 2015; Painter et al., 2016, 2018; Schäfer et al., 2016). Most news focused on disasters and the impacts and consequences of climate change. In this regard, other studies have pointed out the need to diversify topics, particularly emphasizing opportunities, presence of examples of personal or group experiences on "taking action," as well as scientific and technological initiatives, however, in this study we find some interesting examples where experiences of social groups in some countries are shared; also the promotion of individual actions; the presence of scientists and local people; relevance to daily life and passions of the audiences (Painter & Osaka, 2019)—themes indicate some potential benefits of the news format of social media videos.

Social media has been criticized because of echo-chambers and polarization, but my study finds evidence of a wider range of themes and frames previously recommended by climate communication scholars. For example, I found that many scientists were featured along with local people to give a human face to the problem (Corner et al., 2015; O'Neill et al., 2013; Painter & Osaka, 2019). These characters presented actions that could be carried out in daily life by the civilian population. Although these actions fall short of systemic change, they do indicate that social media does have potential for

engaging people on the issue of climate change in more complex ways than commonly assumed. Following from this, the temporalities of the content were diverse. The academic discussion prior to the last IPCC report mainly supported the negative effects of temporal distance, however, since the publication of SR 15, the negative effects that the approach of deadlines can have on audiences and on the credibility of climate science have also been questioned. The sense of urgency communicated via social media videos, therefore, may be a potential asset for the news format.

Three main approaches can be distinguished in the temporal framing of the messages contained in the videos. The dominant one was to portray the impacts and consequences of climate change in the present. Second, a large proportion of videos did not provide any specific timeframe—it is therefore necessary to evaluate in future studies what this omission and the ensuing perception of temporal distancing or ambiguity is when talking about an unspecified future. Third, there were some videos that set specific deadlines, including both 2030 and 2050, implying a 10–30 years limit to act and prevent catastrophic climate change, an approach that has also been questioned by various academics (Asanayama et al., 2019; Boykoff & Pearman, 2019; Hulme, 2020).

At the geographical scale, a positive result is the conjunction of narrative and images that facilitate the visualization of the effects and experiences of local people in different parts of the world. However, most of the videos were of far away places and not within the region of Spanish-speaking audiences. Indeed, half of the materials analyzed had a global geographic focus as suggested by Painter and Osaka (2019) in their tips for better coverage of the climate crisis. Whether together or separately, it will be interesting for future research to examine the effects of distance on the geographic and time frames of social media news. And the effects of projecting a future in abstract and distant terms—both temporally and spatially.

Indeed, the geographical location of the video news analyzed—which came from regional (in terms of language) and global digital-born media outlets—did not focus on the region where the information was directed, in this case: Latin America, Spain, and Spanish speakers in the USA. Only two of the videos examined mentioned Latin American countries. Most of the content dealt with Anglo-Saxon countries. Issues relevant for Spanish-speaking regions with regard to the effects and consequences of climate change, health, migration, activism, alternatives, etc. were not discussed at all. It would be important to conduct research to determine what lies behind this lack of content specific to the audience's region. Evaluating the effect that this geographic distancing of the video news has on the audience, in terms of the relevance they assign to the issue and of their local or regional involvement, would also be important.

Some aspects of the attention economy have been studied in the field of journalism and social media platforms; they have, however, not been addressed in the research areas of climate change communication. It is necessary, both in practice and in research, to incorporate the temporal elements of the attention economy and examine the role they play and determine to what extent they can be

beneficial for bringing audiences closer to various global issues. The video content, despite this uniformity of format in line with logics of the attention economy, was more variable than anticipated. This shows how it is necessary to continue developing new theoretical and methodological approaches and to carry out case studies of social media such as Facebook or Instagram, in order to compare traditional with native digital media in social media platforms. Taking into consideration the temporal focus of the news can help to complement information about other variables that have been frequently researched, such as the issue themes, social actors and geographical locations, as one more face that is important to take into account both in the strategies of climate change journalism and communication, and in its research.

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5 Generational anxieties in United States climate journalism

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Introduction

A common rhetorical strategy used by an array of environmental stakeholders is to call upon a shared moral obligation to "future generations" (broadly defined) and the security of one's children and grandchildren. Greta Thunberg, a leading Gen Z climate activist recently named the 2019 *TIME* Person of the Year, consistently taps into this rhetorical repertoire of "intergenerational justice." Notably, Greta's condemnation of adults features prominently in the United States press. Thunberg's Fridays for Future campaign brands itself as "apolitical" and demands immediate action from older generations and from well-established global institutions such as the World Economic Forum and the United Nations. But she does not delve into much detail regarding the mechanisms of historically oppressive systems of governance nor does she call for anything akin to revolution. Greta, arguably, does not pose much of a political threat without more systemic critiques and radical proposals for change.

Congresswoman Alexandria Ocasio-Cortez (also known as "AOC"), on the other hand, does pose a threat. Hugely popular with a growing number of supporters, AOC explicitly challenges the political-economic structures of the United States. Calling for a Green New Deal (GND), AOC spearheads campaigns for an extensive re-structuring of the economy through a "just transition" from fossil fuels to clean energy (Ocasio-Cortez, 2019). A real force to be reckoned with, AOC consistently lambasts the political establishment and calls for a more equal distribution of wealth and power.

Like Greta, AOC features prominently across United States media (Hagle, 2019, n.p.; Shaw, 2019, n.p.). AOC is, on the one hand, represented in a manner on par with Greta—as a rebellious youth fighting against an oppressive older generation. On the other hand, however, AOC is denigrated as dangerously myopic, whereas Greta is elevated to the position of a prophet and in possession of the "correct" vision for a sustainable and "ethical" future. What does it mean that AOC's political project is reduced to little more than a Millennial Zeitgeist and an extreme phenomenon of the present moment? Moreover, why are climate politics seemingly increasingly cast within a narrative of "generational difference" with distinct stereotypes assigned to Gen Z, Millennials, and Boomers? In this chapter,

I interrogate these questions and examine the trope of "generational conflict" in United States climate journalism. As a case study, I analyze representations of Representative Alexandria Ocasio-Cortez and Greta Thunberg in one of the United States' most widely distributed, non-daily politics and news magazines: *TIME*.

Generations and social change

The concept of "generations" is used in common parlance today, often to describe differences between the young and old as opposed to continuities across age cohorts. The notion of a distinct, "generational consciousness" was examined by sociologist Karl Manheim (1997/1928) as a potentially important variable to consider when studying the formation of knowledge in modern society. Mannheim's essay, originally published in 1928 and entitled "The Problem of Generations," was motivated by his firsthand observation of the trauma young men and women experienced following the Great War (Bristow, 2016). Manheim's overarching corpus of work was concerned with how different experiences among different groups of people influenced ways of knowing and ultimately, social change (Pilcher, 1994, p. 482). In his essay on generations, Manheim (1997/1928) specifically tried to develop an empirical means for taking into account the experiences of different age cohorts. Manheim asked: What impact does a societal event such as World War I have on the epistemology of a "generation" coming of age? And moreover, how does this contribute to social change?

Manheim (1997/1928, pp. 24, 35) was suspicious of positivist notions of age, whereby all young people are assumed to think and act in similar ways because of their biology. He also challenged determinist ways of thinking about time (Manheim, 1997/1928, pp. 23, 27). Manheim rejected a mechanistic understanding of temporality and instead, argued in favor of a more dynamic definition. People experience time differently, according to Manheim, and it cannot be understood as uniform. Manheim (1997/1928, p. 31) therefore advanced Wilhelm Pinder's (1926) idea of the "non-contemporaneity of the contemporaneous"—meaning "all people living at the same time do not necessarily share the same history" (Pilcher, 1994, p. 486). With this understanding of historical time as contingent, Manheim argued that age is just one factor among many in the formation of knowledge. Ultimately, Manheim (1997/1928, pp. 60–61) concluded his essay with a major caveat—he cautioned that generations could not and should not be weighed above class or national citizenship when trying to make sense of social change. Manheim (1997/1928, p. 53) warned against using a "bird's-eye perspective to 'discover' fictitious generation movements to correspond to the crucial turning-points in historical chronology." Class and national consciousness, in Manheim's view, were more pivotal for understanding social change than age cohort.

British sociologist Jennie Bristow (2016) points out that despite Manheim's ultimate conclusion, "The Problem of Generations" experienced a renaissance in the geopolitical West following the Cold War and subsequent declaration of the

"end of history" (Fukuyama, 1992), but with major oversights. Sociologists once again became interested in the category of generations and referred to Manheim's work, according to Bristow (2016), but oftentimes without acknowledging his critical insights regarding the importance of class, national contexts, and the contingency of historical time. The scholarly (and popular) conception of generations following the Cold War—especially in the United States (Bristow, 2019)—instead opted for a universalized image of History that tended to obscure differences between and within groups of people. Class became irrelevant. And national histories were lumped together through a global, "master narrative" written under a linear vision of "progress" with a distinct and present "end."

Indeed, the post-1989 time period was especially rife with universalist discourses across the Anglosphere and Europe. This was an era of globalization, mass mediations, and optimism for what this meant. Indeed, new media technologies were understood (and in many ways are still understood) as tools for fostering cosmopolitan values across different national, class, and also generational identities (Beck, 2009). But with the rise of 24/7 news broadcasts, "clips" of particular moments from time were taken out of context, commodified, and circulated across television screens and later, across the web. Instead of telling complex stories through a diversity of perspectives and accounts (as the ideal of cosmopolitanism would, in theory, promote), News Reports tended to simplify events through a binary of "good" versus "evil" / "moderate" versus "extreme" / "us" versus "them". Bristow (2019) clarifies how it is within these contexts that the concept of "generations" was reactivated and used in a very particular way. Instead of explaining social strife and conflict through the lens of ongoing class and anti-colonial struggles, Bristow (2019) argues that generational differences were often leveraged in an essentializing manner by journalists, pundits, politicians, and some revisionist scholars to explain (and denigrate) past and current social conflicts.

Right from the get-go, the Boomer generation took center stage in this narrative. Bristow argues (2019, pp. 87–88) that "from the moment the first Boomers reached their teenage years, they were viewed uneasily both as a product of the turmoil of the Sixties, and as the embodiment of cultural and social change." With the close of the Cold War, Boomers were imagined as a totem of a bygone era—the last generation to have lived within historical time. And as relics of history, the "flower children" of the 1960s were commodified and packaged through Woodstock posters, films about hippies, and bell bottom jeans (Petras, 1994). Through this coating of an entire era in plastic wrap, the tumultuous politics of class and national liberation movements during decades prior were flattened and cast as an idiosyncratic consequence of a particularly rebellious generation. Claims of the "end of history," therefore, evacuated the present of context and continuity. With this logic gaining momentum across various sectors of Western society, it became more and more difficult to recognize and resolve historical injustices and to imagine different futures. Instead of class and nation, generations were used by a bulwark of political and social commentators in the Anglosphere and Europe to close off consideration of ongoing struggles and the need to address systemic issues of power, labor exploitation, and oppression—exactly what Manheim warned against.

Generationalism

"Generationalism" is a unidimensional way of understanding history (Wohl, 1979; White, 2013; Bristow, 2016, 2019). Jonathan White (2013, p. 216) defines "generationalism" as "the systematic appeal to the concept of generation in narrating the social and political." Generationalism cuts divergent, contingent, and dynamic experiences out of the picture with one, all-encompassing snip. Bristow (2016, p. 91) argues that "the multiple meanings attached to the concept of 'generation' have made it an attractive term for those seeking a version of a grand narrative." Grand narratives proclaim immutable and ultimate truths and are, in Michel Foucault's (1980, p. 108) language, "mechanisms of power." Building upon this critique, Eve Tuck and K. Wayne Yang (2012) problematize universalist discourses and show how grand narratives erase long histories of imperial oppression and trauma. Heather Davis and Zoe Todd (2017, p. 762) also argue that "a logic of the universal" is "structured to sever the relations between mind, body, and land" and to quell cross-generational, anti-capitalist, and anti-colonial resistance movements. Universal tales of "Humanity" and "History" (with a capital "H"), validate the way things are and cast present conditions as natural, inevitable, unquestionable, and therefore unchangeable. Or, in the ominous words of Margaret Thatcher: "There is no alternative."

Generational narratives, therefore, tend to erase historical injustices *and* depoliticize. Chantal Mouffe (2005) argues that with the advent of globalization following the Cold War, hegemonic constructions of universal "rights" and "wrongs" elevated moral claims above political ones—gravely injuring radical politics and liberation movements. Through universal claims of "Humanity" and "History," a plurality of perspectives and experiences melded into one story of "good" vs "evil." Pieter Maeseele and Daniëlle Raeijmaekers (2017, p. 5) explain how "moralistic terms operate as discursive mechanisms of exclusion" because they limit the possibility for expressing and resolving historical grievances outside of a moral framework. As a result, conflicts are decontextualized and removed from larger and longer histories of systemic oppression. Calls for justice are directed away from corrupt political economies, and instead focused on "immoral" individuals and "immoral" generations.

Indeed, the intensification of both moral and generational discourses following the Cold War, prompted a passionate call for the ethical framework of "intergenerational justice" as opposed to the revolutionary politics of cross-generational coalitions united against capitalism and anti-democratic modes of governance (Bristow, 2019, 2016; White, 2013). Notably, the concept of "intergenerational justice" was picked-up and embraced by a nascent environmental movement. Bill McKibben's (1989) *The End of Nature*, for example, galvanized concerns regarding global warming in 1989. But with the evacuation of radical politics through universal and moral discourses at the time of his writing, McKibben forged his narrative through a Planetary lens (with a capital "P"). Instead of linking global warming to imperial systems of exploitation and extraction that impact BIPOC and historically marginalized communities to a

greater degree (Davis and Todd, 2017; Koch et al., 2019; Vergès, 2017), McKibben focused on the moral failings of recent generations' out-of-control consumerism and corporate greed. McKibben failed to underscore the urgent need to resolve the *specific*, long-term, attritional violence of imperial capitalism—what Rob Nixon (2011) calls, "slow violence." He therefore constructed his influential text through an image of Planet Earth as an abstract totality put under threat by the "immorality" and wastefulness of recent generations. McKibben thus concluded with an equally totalizing argument, citing "Our" moral obligation to an unspecified, undifferentiated, and universalized "future generation" of "Humanity." McKibben chose to define climate change as a universal and moral dilemma, as opposed to a political and structural one with disparate and disproportionate impacts. This "regime of representation" (Hall, 1997) continues to shape climate discourse today—from James Hansen's (2009) *Storms of My Grandchildren* to Greta Thunberg's speeches at the United Nations and World Economic Forum chastising the immorality of adults.

It is important to note that over the past few years, calls for "intergenerational justice" are rising. The trope of "generational conflict" is now used by a range of stakeholders to explain a diversity of issues from the climate crisis to the housing and economic crises too. Bristow (2019, p. 139) argues that

> the script of Boomer-blaming has formed the basis for a new political narrative, which has come to view generational conflict as an alternative frame to class-based politics that dominated the twentieth century. This latest phase of generationalism overstates the importance of generational characteristics and difference, and threatens to turn them into a brittle form of generational identity, deliberately setting old and young against each other.

The trope of "generational conflict" repeatedly elevates the image of "immoral" Boomers versus disgruntled Millennials and an increasingly outraged Gen Z. The historical contexts, causes, and unequal impacts of the climate crisis are obscured through one, all-encompassing image of a "greedy" and "selfish" Boomer generation. Moreover, climate politics are increasingly represented as a response to the *moral* failings of Boomers, as opposed to a response to the ongoing and unresolved violence of imperial capitalism. As a result, cross-generational demands for systemic change are often cut from public view and replaced by the spectacle of a supposed "generation war." This "regime of representation" (Hall, 1997) impedes the recognition of grievances outside of a moralistic framework. The continuity of the past and contexts of the present are removed from sight and so too are radical, cross-generational politics of liberation.

Studying the language of generationalism in United States climate journalism

The apparent prevalence of the trope of "generational conflict" in United States media motivates my study of the language of generationalism in climate journalism. As a case study, I analyzed—through a critical discourse analysis

(CDA)—high-profile cover stories that feature AOC and Greta in one of the United States' most widely distributed, non-daily politics and news magazines: *TIME*. As a non-daily publication, *TIME* is not restrained to daily "breaking news" coverage, and instead provides reflection, interpretation, and commentary on current national events, affairs, and controversies. The readership of *TIME* is assumed to have only a general understanding of climate change and caters to a broad national audience. *TIME* also curates a robust array of photographs and illustrations along with text. Additionally, each issue features a unique cover design. Cover stories are particularly revealing because they reflect the writers' and editorial board's understanding of who and what is most important, central, illustrative, and authoritative on the topic for a national audience. *TIME* cover stories therefore offer a rich and central node for the analysis of discourse and power in United States journalism.

Through a search of *TIME*'s issue archive, I identified three cover stories that featured AOC and Greta, all in the year 2019. This was an important year for both AOC and Greta because this was their "breakout" year and when each garnered widespread public attention for the first time. Their new statuses as "public figures" were evident through, for instance, high-profile media stories and highly coveted features—including cover stories. The *TIME* cover stories I analyzed were: (1) "*TIME* 2019 Person of the Year: Greta Thunberg" by Charlotte Alter, Suyin Haynes, and Justin Worland (December 2019); (2) "Next generation leaders. The teenager on strike for the planet: Greta Thunberg" by Suyin Haynes (May 2019); (3) "The phenom: how Alexandria Ocasio-Cortez became America's lightning rod" by Charlotte Alter (April 2019). The three cover stories share two of the same authors: Charlotte Alter and Suyin Haynes. Charlotte Alter, notably, has written extensively on what she calls "generational" and "Millennial politics." She writes a "generations" beat at *TIME* and has also recently published a book on "Millennial politics" entitled *The Ones We've Been Waiting For: How a New Generation of Leaders Will Transform America* (2020). The "generations" beat for *TIME* includes other cover stories with titles ranging from "How Millennial leaders will change America" (also by Charlotte Alter) to "How Boomers broke America."

I chose to look at representations of AOC because she is a highly visible and extensively featured Millennial politician in the United States. Similarly, I chose to look at representations of Greta because she is a highly visible and extensively featured Gen Z activist. Although both AOC and Greta are young climate leaders, they are very different. AOC is an elected United States Congresswoman proposing specific, radical policies for change. She uses democratic socialist language and primarily frames climate grievances in political terms. Greta, conversely, is (at the time of writing) a Swedish high school student calling for intergenerational justice. She primarily relies upon moral language to frame her climate grievances. Through my CDA, I examined representations of AOC and Greta and assessed how each figure is portrayed. In particular, I analyzed how the language of generationalism and the trope of "generational conflict" are used (or not) and how this structures representations of contemporary climate politics.

The trope of generational conflict

Through my analysis, I find that the trope of "generational conflict" depoliticizes climate change and de-contextualizes the crisis. Discussions of historical systems of extraction and exploitation are absent. The universal and moral language of generationalism, instead, obscures disparities of risk and erases histories of cross-generational resistance movements. Generational differences are elevated as the reason for the contemporary climate movement as opposed to radical political organizing and campaigns for climate justice.

Although Millennials and Gen Z are often lumped together in a broad category of fed-up youth outraged and victimized by Boomer greed, there are also notable differences in representations. In particular, the temporal frames used to describe Greta and AOC vary. Greta is represented as a transcendent, almost holy figure of History, and AOC is represented as a figure of current times, bogged down and blinded by the immediate controversies of the day. Millennials and AOC, in this way, are portrayed as an emotional, radical, and threatening "Other" within today's political milieu of "extremism" (Morris, 2021). Gen Z and Greta, on the other hand, are portrayed as "woke" and on a higher moral and spiritual plane than both Boomers *and* Millennials. The discursive construction of generational differences, therefore, extends beyond a simple narrative of young versus old and reveals interesting political implications.

Transcendent Greta

Greta is consistently portrayed, both visually and discursively, as transcendent of historical time and above the material world. She is represented as morally and spiritually enlightened, operating on a different, purer frequency. Greta's past "experiences of depression, anxiety and eating disorders" (Haynes, 2019, n.p.) are leveraged to accentuate this and to cast her as a martyr figure, sacrificing her body for the greater good of Humanity. In both cover stories featuring Greta, her past personal struggles are underscored. Like a fasting and silent monk, "she stopped speaking almost entirely, and ate so little that she was nearly hospitalized" (Alter, Haynes, and Worland, 2019, n.p.). Greta's suffering is, in this way, represented as a critical step along her spiritual journey and ultimate "awakening."

Emerging from this awakening, Greta is depicted as channeling "her sadness into action" (Haynes, 2019, n.p.) through her solo "climate strike" in front of the Swedish Parliament beginning in August 2018. The words and images used to describe Greta's lone stance and "courage to speak truth to power" (Alter, Haynes, and Worland, 2019, n.p.), build upon her portrayal as a holy figure. In photos accompanying the December 2019 Person of the Year issue, Greta is represented as stoic and monk-like. Wearing her signature blue Velcro shoes (which are repeatedly referenced and pictured in order to accentuate her anti-materialistic nature and disdain for superficial concerns) and a yellow/saffron colored raincoat, one photo[1] of Greta is particularly striking with its religious

imagery. Described as "slumped on the ground, seeming barely bigger than her backpack" (Alter, Haynes, and Worland, 2019, n.p.), Greta is pictured sitting cross-legged on the hard, cold ground, huddled in the shadow of Parliament's grey concrete wall with her homemade protest sign. Greta looks like she is physically suffering, but with a willpower that transcends her body and the present moment in time: "she was there for a reason that felt primal and personal" (Haynes, 2019, n.p.).

With a piercing stare, "focus and way of speaking," the authors of the Person of the Year cover story describe Greta as of "a maturity beyond her years" and as approaching "the world's problems with the weight of an elder, but she's still a kid" (Alter, Haynes, and Worland, 2019, n.p.). Described as somehow other and more than a child, the journalists distinguish Greta as decidedly distinct from her peers: "When she passed classmates at her school, she remarked that 'the children are being quite noisy,' as if she were not one of them" (Alter, Haynes, and Worland, 2019, n.p.). Greta is elevated above other children *and* above adults whom she "hurl[s] shame on" (Alter, Haynes, and Worland, 2019, n.p.) and "castigate[s]" (Haynes, 2019, n.p.). Exceeding kids, grownups, and the material realm, Greta is cast as a figure transcendent of space and historical time. She is represented as a figure of History, not bogged down by the immediate present. Like the Pope—whom she is pictured with in both *TIME* articles— she is depicted as capable of seeing beyond the shortsightedness of the physical present. "If I were like everyone else," Greta is quoted saying in the Person of the Year issue, "I would have continued on and not seen this crisis" (Alter, Haynes, and Worland, 2019, n.p.). This media representation of Greta as an enlightened and transcendent figure has even led to conspiracy theories claiming Greta is a time-traveler, sent by God as a sage and savior (Cecco, 2019). Indeed, this image of Greta as a prophet guides the overarching portrayal of her in *TIME*.

In the May 2019 cover story, for instance, Greta is pictured[2] wearing a modest, almost medieval-looking, pleated green dress with her signature blue Velcro sneakers. Her hair is in braids and she sits within a long, dark, shadowy, and barren hall reminiscent of a convent or monastery. In garb and setting alluding to a hallowed place of holy reflection, Greta looks uncanny. This representation of Greta as a saint-like figure is confirmed and expanded through the citation of "Margaret Atwood [who] compared her to Joan of Arc" (Alter, Haynes, and Worland, 2019, n.p.) in the Person of the Year issue. Compared to Joan of Arc, Greta is declared a prophet: "Where others smile to cut the tension, Thunberg is withering. Where others speak the language of hope, Thunberg repeats the unassailable science: Oceans will rise. Cities will flood. Millions of people will suffer" (Alter, Haynes, and Worland, 2019, n.p.). Expanding upon this prophetic representation, the Person of the Year story also quotes Al Gore, saying: "Throughout history, many great morally based movements have gained traction at the very moment when young people decided to make that movement their cause" (Alter, Haynes, and Worland, 2019, n.p.).

Indeed, the Person of the Year cover photo[3] explicitly portrays Greta in the image of a prophet. Once again sporting her blue Velcro shoes and wearing

her long hair unstyled and flowing, Greta is pictured looking up and out across the ocean. She pays no mind to the tumultuous waves beside her—once again representing Greta as above the physical world. She is cast in a heavenly light and appears to be *seeing* up, over, beyond, and into the future. She sees what can only be witnessed by her, as the enlightened one.

Greta, although represented as different, superior, and enlightened, is not, however, portrayed as alone. She is not the only one naming and shaming adults. Greta along with a "woke" cohort of Gen Z-ers are portrayed as aware of and outraged by the "immorality" of the Boomer generation. Greta is, in this way, "a standard bearer in a generational battle, an avatar of youth activists across the globe fighting for everything from gun control to democratic representation" (Alter, Haynes, and Worland, 2019, n.p.). She is the leader of a generation awakened. This description of "young people across the globe […] awakening to anger at being cut a raw deal" (Alter, Haynes, and Worland, 2019, n.p.), places the contemporary climate movement squarely within the frame of "intergenerational justice." Disparities of environmental risk across and within generations, forged through long histories of systemic racial, gender, and class exploitation, are erased through the language of generationalism. There is little acknowledgement of past radical organizing before Greta's rise. Climate politics, as a result, are evacuated of historical context and reduced to a battle of the ages with a morally superior Gen Z (led by a white, European girl) on one end and a morally flawed Boomer generation on the other—and Millennials are positioned as somewhere (rather threateningly) in between.

Radicalized AOC

AOC and Millennials, in contrast with Greta and Gen Z, are represented as products of the present moment as opposed to transcendent of it. Differing from Greta's "awakening" following a period of spiritual transformation and moral clarity, AOC's journey is portrayed as decidedly less "primal and personal" (Haynes, 2019, n.p.). AOC's rise is described as solidly *of* the time and more political—even "populist"—than prophetic. Indeed, she is called "America's newest human Rorschach test" and a "lightning rod" (Alter, 2019, n.p.) for an increasingly polarized United States. Where Greta speaks of morality, AOC speaks of ideology. Greta is "an avatar of youth activists" (Alter, Haynes, and Worland, 2019, n.p.), whereas AOC is a "democratic socialist at a time when confidence in capitalism is declining, especially among progressive Millennials" (Alter, 2019, n.p.). A political figure, as opposed to a moral one, AOC "represents one vision of the Democratic party's future"—a vision that "threatens the status quo" (Alter, 2019, n.p.). In other words, Gen Z is cast as a "woke" generation and Greta as a morally enlightened, transcendent figure. Conversely, Millennials are represented as radicalized and AOC as a "political phenomenon" (Alter, 2019, n.p.). AOC and her fellow Millennials are, therefore, positioned as a potentially dangerous generation.

TIME's representation of AOC and Millennials as a "threat," parallels with other media representations of the Green New Deal (GND) (Morris, 2021).

The GND is a policy resolution championed by AOC that prioritizes climate justice through a comprehensive set of public initiatives ensuring a "just transition" to clean energy (Ocasio-Cortez, 2019). In December 2018, before a massive anti-GND media campaign, 81 percent of Americans—including 64 percent of Republicans—supported the GND (Gustafson et al., 2018). Since AOC's official filing of the resolution with Congress on February 7, 2019, however, the GND has been repeatedly framed across United States media as a decidedly "Millennial," as opposed to a cross-generational and intersectional, proposal (Morris, 2021). The discursive construction of a threatening Millennial "Other" is leveraged over and over again to discredit the viability of the GND and to cast it as far too "extreme" and "divisive" (Morris, 2021). Generational differences are, in this way, used to delegitimize the GND. Since February 2019, there has been a plummet in public support for the policy, and media coverage continues to neglect a deeper and more robust discussion of the resolution (Gustafson et al., 2019; Morris, 2021).

Indeed, AOC and the GND are described by *TIME* as out of step and divergent from the values of average Americans. AOC's politics are described as "the politics of the possible, not the practical" (Alter, 2019, n.p.). And her "impracticality" is repeatedly framed as threatening to the Democratic party's prospects in 2020. AOC and Millennials are described as far-to-the-left and a real danger to "moderate" America. This fear-mongering is repeatedly employed by journalists across United States newsrooms (Morris, 2021). The GND and AOC's climate politics are, as a result, consistently described as of a "very loud, very online left flank" that won't "necessarily win elections" and thus, must be stopped (Alter, 2019, n.p.).

This repeated description of AOC as a "loud" social media user, alludes to Donald Trump. Indeed, AOC is consistently positioned as on par with Trump by journalists writing for newspapers ranging from *The New York Times* to *The Wall Street Journal* (Morris, 2021). Both AOC and Trump are framed as extremist threats within a dangerously divided United States (Morris, 2021). This representation of AOC sharply contrasts with Greta's disdain for "the media attention placed on her" (Alter, Haynes, and Worland, 2019, n.p.). Greta is painted as above all of this hoopla. AOC, on the contrary, is tarred as one among a stable of political "show horses who craves the cameras" (Alter, 2019, n.p.).

This striking difference in representation elevates Greta's calls for intergenerational justice above AOC's calls for cross-generational coalition-building and democratic politics for climate justice. The climate justice movement is therefore sidelined from coverage along with its long histories of cross-generational, transnational, and radical organizing for a more just and equitable society. The GND's commitment to a "just transition" is simplified, decontextualized, and portrayed as an idiosyncratic, "Millennial" idea. Democratic socialism, in turn, is depicted as a temporary phenomenon that will subside when the United States "stabilizes" and when politics become less extreme—as it "inevitably" will. Within this narrative, AOC is described as a child of the Recession who, like her Millennial peers, became disillusioned and then

radicalized through Occupy Wall Street and Bernie Sanders. AOC's "conversion" to democratic socialism and support for Bernie Sanders—who is a Boomer, although this is conveniently sidestepped by journalists—are explained as akin to a political Zeitgeist, and therefore divergent from what will "inevitably" be a "moderate" political future for the United States.

AOC's journey into politics is therefore described in very different terms than Greta's monk-like awakening. AOC is pictured, for example, drinking cups and cups of coffee in photos accompanying the *TIME* cover story. This contrasts with Greta's self-discipline and objection to the pleasures of the material world. AOC is also described singing "TLC's 'No Scrubs' and subsist[ing] on Red Bull, Clif Bars and Hot Cheetos" during her "transformational" trip to Standing Rock (Alter, 2019, n.p.). Again, this junk-food-filled journey starkly contrasts with Greta's fasting and silence. Through these portrayals, AOC is cast as a youthfully flawed figure, and Greta is once again confirmed as a transcendent figure of History.

The image of AOC on the cover of *TIME* accentuates this difference. The cover photo[4] shows AOC wearing makeup with bright, red lipstick (her signature red lipstick is repeatedly referenced—clearly, a more superficial trademark than Greta's blue Velcro sneakers). AOC's gaze in the cover photo, like Greta's, is directed outward. But in divergence from Greta's elevated and lofted gaze, AOC is looking straight ahead—apparently unable to see beyond what is right in front of her. AOC, once again, is cast as a "phenom" (Alter, 2019, n.p.)—an extreme figure living in extreme times. Greta, on the other hand, is reaffirmed as a decidedly different kind of Human—a superior figure of History who sees beyond the present and into the "right" and "inevitable" future that lies ahead of this particularly tumultuous blip in time.

Through these divergent representations, a clear binary is forged between a "right" and "wrong" approach to climate politics, with AOC and Greta used as caricatures to demonstrate this distinction. Representations of generational differences between Boomers, Millennials, and Gen Z are leveraged to elevate intergenerational justice as the prime—and superior—reason for the contemporary climate movement. Greta's "moral clarion call" (Alter, Haynes, and Worland, 2019, n.p.) is celebrated as a unifying, honorable, and prophetic vision for the climate movement. Whereas the shortsightedness of Boomer greed and Millennial radicalism is positioned as an obstruction preventing this "right" vision from manifesting. And because a dichotomy is forged between "good" and "bad" climate politics, with democratic socialism and climate justice rejected as the latter, individual "green lifestyle" choices are championed as the solution to climate change.

Boomer greed, in other words, is portrayed as the real problem—not capitalistic systems of extraction and exploitation. Boomer consumption habits, therefore, are what need to change, not the political economy. According to this narrative, the main task at hand is to get Boomers to adopt a more "ethical" and "sustainable" lifestyle—as per the lead of Greta whose family "mostly stopped eating meat, installed solar panels, began growing their own vegetables and

eventually gave up flying" (Alter, Haynes, and Worland, 2019, n.p.). "The common thread is outrage over a central injustice," according to the *TIME* journalists, "young people know they are inheriting a world that will not work nearly as well as it did for the aging adults who have been running it" (Alter, Haynes, and Worland, 2019, n.p.). Left out of this narrative and analysis, however, are the disparities *within* as well as *continuous across* generations of historically marginalized groups of people—disparities that cannot be resolved by traveling from Stockholm to Paris on a train instead of an airplane.

Implications of an intergenerational justice media frame

My analysis of the language of generationalism in *TIME* reveals how issues of race, gender, class, and historical injustices and inequities are cut from view and replaced by the image of a villainous Boomer generation versus a short-changed—either morally superior or radicalized—cohort of youngsters. Issues and histories of climate justice are obscured through the media frame of intergenerational justice—a frame that, as described above, often erases differences *within* generations as well as continuities *between* them. The trope of "generational conflict" bars a more dynamic engagement with a diversity of responses from, in particular, BIPOC organizers who have been working for decades to address the climate crisis through more democratic and equitable methods. Indeed, the journalists writing for *TIME* take pains to clarify that "Thunberg is not aligned with these disparate protests" (Alter, Haynes, and Worland, 2019, n.p.), as if her alignment with intersectional and cross-generational liberation movements would tar her cause. The language of generationalism is therefore used to elevate a morally-based climate movement as superior and above the climate justice movement and radical forms of climate politics. Through the moral and universal language of generations, democratic socialism, for instance, is demonized and cast as "threatening" through the image of an extremist Millennial "Other." Through the image of an unsavory Millennial "Other," AOC and the GND are reduced to little more than an historical phenomenon—and a dangerous one at that (Morris, 2021). Greta, on the other hand, is celebrated as transcendent and as a prophetic figure. This celebration elevates her campaign for intergenerational justice as the "right" and "inevitable" solution, while cross-generational, transnational, and intersectional coalitions fighting for climate justice and systemic change are rejected and erased from journalistic accounts.

A part of this process of erasure, is the appropriation and evacuation of radical terms. Greta's so-called "pioneering" (Alter, Haynes, and Worland, 2019, n.p.) climate *strike*, is an example of this. The appropriation of radical terminology is not new—it has been a core feature of United States media and culture of capitalism (or, culture *as* capitalism) since the Cold War. James Petras (1994) discusses how through processes of "cultural imperialism," liberatory and leftist politics were stripped of meaning and context during the ideological battles of the Cold War era. For example, through "co-optation," radical terms and

discourses of liberation were—and still are—appropriated by corporate advertising campaigns to sell products (Petras, 1994). Buying and wearing Levi's jeans, for example, became an expression of "freedom," and socialist movements, in contrast, became an expression of mindless "conformity." Similarly, today, buying a Greta mask, book, or poster at a youth climate strike and posting it on Instagram is an expression of "wokeness." Conversely, supporting the radical politics of the GND is represented as "obstructive" and stalling the development of a more sustainable and environmentally friendly world.

Like other "pioneers" that came before her, Greta's power and influence as a change-maker is attributed to her unparalleled, superior, individual qualities: "Because of her, hundreds of thousands of teenage 'Gretas,' from Lebanon to Liberia, have skipped school to lead their peers in climate strikes around the world" (Alter, Haynes, and Worland, 2019, n.p.). According to this representation, collective organizing across generations and nations is irrelevant. Greta is the reason for the global climate movement. And as a figure of History, Greta's motivation and vision for *her* climate strike is all that matters. "Thunberg's main goal is for governments to reduce emissions in line with the Paris Agreement, limiting global temperature rise to 1.5°C over pre-industrial levels" (Haynes, 2019, n.p.), but this goal and the methods for achieving it continue to exclude the marginalized knowledges of, for example, environmental justice activists and BIPOC organizers who have been campaigning for different, more equitable and just responses to climate change for decades. Despite the long histories of the climate justice movement and radical climate politics, Greta—another white, European "visionary sage" figure—is reaffirmed as possessing the "right" vision. Through the image of Greta as a prophet, she is promoted above other organizers. The celebration of Greta as a "visionary sage" figure, therefore, impedes more democratic and inclusive methods for responding to the disparate threats of the climate crisis.

History and accountability

The celebration of Greta as a prophet obscures issues of climate equity and justice. A key challenge for representing climate change is contextualizing the crisis through a diversity of accounts and experiences. Indigenous journalism scholar, Candis Callison (2017; Callison and Young, 2020), discusses how accountability is impossible without recognition of the particular harms perpetuated by political, economic, and cultural systems of oppression. The ongoing violence of imperialism and capitalism are not invisible and are very material and present. The materiality of historical harm is, however, removed from view through cultural processes of erasure whereby systemic acts of violence are "decoupled from its original causes by the workings of time" (Nixon, 2011, p. 11).

According to Dominick LaCapra (1999, p. 700), "transhistorical" is synonymous with "absence" and "absence is not an event [because] it does not imply tenses (past, present, or future)." "Absence," as opposed to "loss"—which is tied to a tangible event or particular moment of death and passing—exists in

conditions of indeterminate cause (LaCapra, 1999, p. 700). The elevation of an abstract, transcendent notion of Time therefore works to blur and erase specific events, particularities of impact, and historical grievances. Different and distinct experiences of violence and harm are erased through the void of History in which no cause is decipherable, or even relevant. Within the timescale of History, accountability is impossible.

Although *TIME* and similar publications elevate Greta through the temporal frame of History, radical and anti-colonial liberation movements continue despite their erasure from mainstream media. Candis Callison (2017) stresses how BIPOC communities and environmental justice organizers are not victims and should not be represented as such. Rather, journalists should represent organizers as they are: dynamic, active, and with full agency as speaking subjects (Callison, 2017). By centering a diversity of perspectives and proposals for change, the monolithic image of History as prophesized by a "visionary sage" would ring hollow. And with this hollowing, cross-generational, intersectional, and transnational movements for climate justice would fill the void and show how there are many different, democratic, just, and equitable futures within reach.

Conclusion

Although based on a relatively small case study, my analysis points at more general issues in how climate activism and social movements are represented in popular media discourse. The moral and universal language of generationalism tends to obscure and obstruct recognition of disparities of risk as well as more radical, cross-generational politics for change that demand more than just Boomers changing their behavior. Indeed, the image of an immoral Boomer generation conveniently sidesteps exploitative systems of power that disproportionately impact historically marginalized groups and that demand more fundamental and extensive transformations of the economy and governance. My case study signals how the media frame of "intergenerational justice" is used as a rhetorical device to erase cross-generational, anti-capitalist, and anti-imperial movements from public view by focusing on Boomer consumer habits instead of the political economy. It is imperative that the language of generationalism and the media frame of "intergenerational justice" are further analyzed and critiqued so that today's radical politics avoid the same fate as those of the Sixties.

Concerningly, social movements in 2020, including Black Lives Matter, are increasingly compared to the 1960s. And with this comparison, the politics of civil rights, democratic socialism, and social justice are once again attributed to the idiosyncrasies of an offbeat generation, but this time Millennials are cast as the "dangerous" radicals instead of Boomers. Manheim (1997/1928, p. 30), nearly a century ago, warned that if one "assumes a direct relationship between the spiritual and the vital without any sociological and historical factors [e.g. class, power, nation] mediating between them, he will be too easily tempted to

conclude that especially productive generations are the 'chance products of nature.'" Essentializing generations and equating generational differences as the reason for social change therefore risks obscuring historical continuities and oppressive systems of power; it also risks casting an entire age cohort as the reason for social conflict and therefore as a "threat." Will Millennials in sixty years' time be cast as villains in the same way that Boomers are now? How will discursive processes of generational "Othering" influence—or more likely, suppress—democratic modes of governance? It is crucial that critical cultural scholars of media pay attention to the language of generationalism and further interrogate how the trope of "generational conflict" essentializes, erases, and obstructs recognition of cross-generational coalitions fighting for climate justice.

Notes

1   The photo is by Michael Campanella from Getty Images and appeared in the *TIME* December 23/30, 2019 cover story entitled, "*TIME* 2019 Person of The Year: Greta Thunberg." The caption for the photo is, "Thunberg first began skipping school in August 2018, sitting in front of Swedish Parliament to demand action."
2   The May 27, 2019 cover photo was taken by Hellen van Meene for *TIME*. The headline accompanying the cover image is: "Next Generation Leaders. The Teenager on Strike for the Planet: Great Thunberg. Plus 9 More Trailblazers Shaping Our World."
3   The December 23/30, 2019 cover photo was taken by Evgenia Arbugaeva for *TIME*. The headline accompanying the cover image is: "Person of the Year. Greta Thunberg: The Power of Youth."
4   The April 1, 2019 cover photo is by Collier Schorr for *TIME*. The headlines accompanying the cover image are: "The Phenom: How Alexandria Ocasio-Cortez became America's lighting rod" and "Changing the Climate Fight."

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6   Reproducing government politics of climate change in Thai news media

Duangkaew Dhiensawadkij

Introduction

The immediacy of climate change is highlighted by the legacy news media in Thailand because it fits with the "breaking news" format of newsworthiness. This is similar to climate change news coverage in other countries that privilege established news sources and episodic news narratives. However, this journalistic narrative often erases environmental problems in the local domain because the episodic and "breaking" climate news narrative emphasizes the global, as opposed to local, risk. The cumulative environmental effects are vast but the representation of global climate change in Thai news tends to divorce climate change risks from the reality of ecological destruction in local-present time. This chapter discusses how journalism in Thailand values the future aspects of climate change temporalities, yet the past and the present of climate change are absent from news narratives. As a result, the actions of Thai government policies that support large corporations are cut from view as are the negative impacts of these policies on local communities. The discussion subsequently leads to the necessity to rethink the work of journalism in the contexts of Thailand and a capitalistic media market. Ultimately, this chapter concludes that environmental journalism in Thailand has been deprived of its ability to cover climate change in-depth and well at the local level because of increased economic pressures that inhibit flourishing newsrooms.

The chapter starts with an introduction to the social relations of climate change in Thailand with a special focus on national climate change policies. This context outlines dominant discursive practices in Thailand pertaining to climate change. The next section focuses on environmental journalism in Thailand and how journalistic discourses are shaped by professional values and norms. From this, the chapter articulates how national contexts and journalistic practices influence the domestication of climate change discourse in Thai media in ways that ultimately disregard local environmental problems. Finally, the chapter advances the theoretical perspective of "slow violence" to identify the challenges and stakes of climate change journalism in Thailand. The arguments and suggestions provided in this chapter are formulated based on the key findings from my Ph.D. thesis *Reproducing the Politics of Climate Change: A Study of Thai*

Newspaper Reporting (Dhiensawadkij, 2018). The thesis employs two methodologies: textual analyses of climate change in three Thai newspapers and in-depth interviews with 26 journalists and news sources.

Climate change situation in Thailand and the stakeholders

The Thai proverb, "Fish in the pond, rice in field" (ในน้ำมีปลา ในนามีข้าว: Nai Nam Me Pla Nai Na Me Kao) is comparable to the western notion of "a land of milk and honey." Forty percent of Thailand's population works in the agricultural sector. However, the country's economy also relies heavily on non-agricultural sectors such as tourism and industry. Regarding this socio-economic context, rich natural resources and healthy environmental conditions are important factors in generating Thailand's economic growth. Nevertheless, the country is facing deforestation and land degradation in 60% of the total area. This problem is linked with climate change, water management and air pollution (Huang and Gupta, 2014, p. 233). In 2019, Thailand was ranked ninth in a list of the world's most climate change vulnerable countries (the Office of Natural Resources and Environmental Policy and Planning (ONEP, 2018)).

Despite the fact that farmers and fishermen have been facing hardship in production activities for decades, both government and news media mainly pay attention to climate change mitigation rather than to climate change adaptation. In order to secure a low carbon society in the future, Thailand ratified the Paris Agreement as a Non-Annex I country in 2015. The government has pledged to lower its greenhouse gas emissions by 20–25 percent by 2030 from the estimated emission rate in a business-as-usual (BAU) scenario. In 2018, the country was ranked the 22nd in the world in terms of greenhouse gas emissions at 288 $MtCO_2$. The emissions per GDP of the country is calculated at merely 0.3 $KgCO_2$/GDP or 52nd in the world's rank (Global Carbon Atlas, 2019). In terms of climate change journalism, climate change mitigation has been the main focus since the Kyoto Protocol in 1997, especially among news stories with high prestige (Olarnrat, 2009; Salathong, 2011). But the situation related to climate change adaptation gains comparatively little attention in news coverage. Content analyses of climate change news showed that during 2011–2013, national newspapers published 224 climate change adaptation news articles or 11.60 percent of overall climate change news articles. These articles also lack sufficient information to increase climate change resilience of local people in the agricultural sector (Kasemsap, 2016, p. 122).

The national policy on climate change signifies that the government advances ambitious goals for the future by enhancing climate change mitigation policies. However, the present environmental problems which require urgent attention through climate change adaptation at the local and community levels are reduced to the status of low priority. Currently, the ONEP is responsible for steering the Climate Change National Master plan into action. This responsibility includes directing the National Adaptation Plan (NAP) that focuses on six

core environmental issues, namely, water management, food security, tourism, health care, natural resource administration, human security and settlement. According to NAP, the ONEP assigns missions to initiate climate change adaptation activities at various official departments. However, the ONEP does not allocate allowances to the local administration offices. It is estimated that merely preparing the agricultural sector to increase climate change resilience requires more than a billion dollars (Huang and Gupta, 2014). Importantly, the ONEP does not have authority over the local administration offices. Therefore, implementing NAP and increasing climate change resilience in Thailand is easier said than done. On the contrary, the ONEP officially budgets THB 1,903 million (USD 58 billion), which is funded by international entities for example, the Green Climate Fund and German government, to emissions reducing activities from 2016 onward (Weeranon, 2020). This imbalance in administration policies between climate change mitigation and climate change adaptation is, in fact, mirrored in the dominance of climate change mitigation news coverage in national newspapers.

The government aims to employ the national news media as a channel to create climate change literacy. The NAP mentions that "journalists are an influential party to increase public information about climate change adaptation. Essential knowledge about climate change, risk prediction and warning, governmental recommendation during natural disasters can be publicized immediately by news media" (ONEP, 2018). In fact, climate change news coverage in Thai newspapers emphasize the risk of failing to conform to the Paris Agreement as opposed to providing public information about unforeseen dangers from the destruction of ecological systems. An analysis of representations of climate change in Thai newspapers during the COP21 meeting (Dhiensawadkij, 2018), indicates that climate change was framed as a global act of cooperation for reducing greenhouse gas emissions. This news frame is utilized by government officials (who are the usual, recurrent sources cited in news articles) to justify national environmental policies, especially the investment in "clean coal" power plants owned and operated as state enterprises. Moreover, the government officials claim that curbing emissions to reach international standards is a responsibility of Thailand. In this sense, climate change discourse is domesticated to support the government's policies of natural resource management for the country.

The journey of environmental journalism in Thailand

The inadequate representation of local climate change risks by Thai news outlets needs to be understood within the context of a two decade period of decline in environmental journalism across Thai newsrooms. The golden period of environmental journalism in Thailand was between 1980 and 2000 (Kaewthep, 2013). The emergence of environmental journalism in Thailand is closely tied to the struggle between classes seeking the equitable distribution of natural resources. A veteran environmental journalist explains that

reporting environmental news involves working with people in rural communities who do not know how to make their story attractive to society. Their problems are not the talk of the town because they are not in powerful positions. […] As environmental journalists, we are fighting for people in rural communities.

(Mekka Dettrakun, 2015, cited in Dhiensawadkij, 2018, p. 213)

The very first investigative environmental news story was published in 1973 when a dictatorship government ruled the country. The death of six members of the elite class in a helicopter accident in a conserved forest brought public attention to environmental conservation. The series of investigative reports revealed a conspiracy of 60 people from the elite who trespassed on the largest rainforest area, Tung Yai Na Ray Suan Wildlife Conservation Park, in order to hunt game. A peak of public attention in environmental conservation has contributed to the work of environmental journalists during the 1980s-90s when the environment was a major news beat for national papers. Within this period, the political situation in Thailand had gradually changed from a totalitarian dictatorship to elected governments with Prime Ministers who were former military generals. In terms of the economy, the country rapidly exploited its natural resources to generate economic growth. Indeed, stimulating international investment in heavy industry was the flagship economic policy during the 1980s. Along with this political-economic context, the number of news stories related to environmental crimes had increased, as well as conflicts between key stakeholders of natural resources, namely the state, investors, and local communities. That is to say that environmental journalism in Thailand established its profession by giving voice to the struggle of lay people in environmental justice movements who were against the increased investment and role of powerful economic institutions. This cornerstone of the profession contradicts the news business's sources of income and sponsorship from the very same powerful corporations and state enterprises that form the backbone of revenue (Chongkittavorn, 2013). By the time the Asian financial crisis hit the country in 1997, news agencies closed down their environmental news desks because they were considered "unprofitable and [a] cost burden" (Chuenjaichon, 2005; Wannasiri, 2005; Kaewthep, 2013). Editorial rooms and the overall process of news production across news departments are today still run without an environmental news beat. This has meant that veteran environmental journalists were transferred to work for other news beats such as health and science, agriculture, and technology (Samabhuti, 1997).

   The lack of an environmental news desk in Thai newsrooms results in a temporal discontinuity of climate change coverage. Climate change issues are the repercussions of development policies (Nixon, 2011) and climate change issues in Thailand connect with long-standing environmental injustices in the local domain. Therefore, the capability of newsrooms to link historically unjust development policies to local climate change issues in the country today, is vital for increasing public understanding and demands for action at the local as well

as the global level. However, climate change news coverage that are produced by other news beats, for example, the business news beat, only emphasizes the global mission and importance of decarbonization as opposed to community adaptations. The newsrooms therefore fail to cover the complexity of environmental issues across diverse news agendas on a daily basis. This situation thus obstructs public literacy and understanding of climate change within a wider political-economic and historical context—an understanding vital for political change and environmental justice.

Climate change temporality and episodic news framing in local coverage

It needs to be emphasized that, even though Thai newsrooms lack dedicated environmental news beats, daily environmental events are published in news reports. While the stories related to the environment and natural resource management policy are the responsibility of specific news bureaus located in particular ministries, news stories about environmental crimes, for example, national forest trespassing, smuggling logs, and wildlife trading, usually rely on the work of stringers. This newsgathering process increases episodic news frames in environmental news reporting. Research (Dhiensawadkij, 2018) shows that the episodic news narrative is also utilized in climate change reporting. Climate change news coverage in Thailand usually reaches its peak in close coordination with the timing of international events, especially UNFCCC meetings (Salathong, 2011; Dhiensawadkij, 2018). This event-oriented news coverage largely entrenches the dependence on official sources in climate change newsgathering, which reporters usually take for granted (Fishman, 1980). This problem causes news coverage in Thailand to put too much emphasis on the necessity to prevent the country from failing to conform to a global agenda in reducing CO_2. As a consequence, climate change has been framed as an international political problem on a global agenda of issues and institutional experts become the "primary definer[s]" (Hall, 1978).

Research (Dhiensawadkij, 2018) shows two perspectives on climate change that are recurrently highlighted through Thai news discourse. First, rising temperatures are elevated as the most dangerous effect from climate change. Deforestation contributes to rising temperatures and therefore, planting more trees are recurrently suggested as important for absorbing CO_2. Secondly and importantly, climate change is framed as a primarily *global* issue. Reducing greenhouse gasses, therefore, is an international political problem and Thailand needs to plan and to comply with this global scheme. The risks of climate change, according to this logic, stem from a failure to reduce emissions and this failure, in turn, can potentially damage the country's reputation. To illustrate, here follow excerpts from two news reports of the COP21 meeting in 2015:

- Delegation of the European Union to Thailand and the Ministry of National Resources and Environment join hands to announce readiness for the Paris COP21 commitment. The Prime Minister will announce the

global warming reduction policy-aim to cut 20–25% of emissions before 2030. There is a readiness to bind international agreement to keep the world's temperature below 2 degrees Celsius.[1]

• As Thailand has pledged to the Paris Agreement, it is compulsory to initiate it as a national plan because we are audited internationally. If we fail, it would affect the country's recognition, trading pressure and environment. According to this pressure, we are required to adjust.[2]

The series of international news about climate change published in Thai news media could perhaps maintain the momentum of public awareness regarding CO_2 reduction / "decarbonization" as a global movement. Yet, the representation of climate change in such news coverage may also disengage audiences from climate change and its ecological effects in the local domain. This is because the journalists tend to maintain journalistic objectivity in news reporting. The official government news sources thus gain an advantage from pushing their claims related to natural resource management policy in climate change news stories. As a "credible news source," the state and industry claims-makers exploit climate change issues to support their own agendas as opposed to the best interests of the climate and local communities. Indeed, this newsgathering process contributes to state hegemony (Gitlin, 2003, p. 264) more than to addressing the reality of environmental problems. The relationship between climate change issues and national development policy that focuses on economic growth but disregards its environmental impact, is not represented in the national news reports.

In the specific contexts of Thailand, I argue for the necessity to emphasize that climate change is a global risk but that the degree and type of the effects varies in different geographic locations. Despite this fact, employing episodic frames hinders a broader temporal contextualization in news. It can be seen that newsrooms are having difficulties with framing daily events through an environmental perspective because reporters lack expertise in environmental issues (Dhiensawadkij 2018). This "environmental frame blindness" (Maras, 2013, pp. 66–70) empowers the government official news sources to triumph over lay people in climate change discussions. To illustrate, my past research (Dhiensawadkij, 2018) shows that a news story about a state-owned power plant focused on construction bidding, returns on investment, and electricity supply, as opposed to the results of the environmental impact assessment. The voices of community members who reside around the power plant were therefore left out from the news report (Dhiensawadkij, 2018). Although "climate change" is mentioned in the news report, the word is merely addressed by the official claims-makers that building new "clean coal" power plants are environmentally friendly and helps reduce overall carbon emissions at the global level. In this sense, the news coverage does not contribute to climate change literacy because these claims are not contextualized within longer and deeper histories of exploitation and development at the national and local level.

Climate change churnalism under the name of a sustainability news "scoop"

Lack of an active environmental news beat in Thai newsrooms also impacts how journalists access and evaluate particular news sources in the process of news-gathering. Business enterprises have been the key sources of climate change information for Thai newsrooms. Climate change news in traditional news agencies usually discuss "green" products and services (Kasemwit, 2008; Olarn-rat, 2009; Salathong, 2011). The marketing benefits from "churnalism" (Davies, 2009)—the practice of journalists cutting and pasting content from business press releases to produce low-cost news—are significant. The "green consumption" scoop has become a solution to quickly fill in "news holes"—the absence of stories for a particular issue or news segment (Dhiensawadkij, 2018)—because the PR industry has realized that environmental and science journalists have less time in news production. Apart from the upper hand in accessing and providing information to journalists (Williams, 2015), business organizations employ various tactics to secure news opportunities, especially setting up pseudo-events to claim their contribution to "sustainable development" and climate change mitigation. This tactic can ensure event-oriented coverage as well as photo opportunities. To the audience, however, this green consumption scoop discourages the development of reflexive citizens who can actively participate in both national policy-making and climate change mitigation and adaptation practices. On the contrary, it increases the sense of being a "green consumer" that empowers capitalist market ideologies that perpetuate the climate crisis and deleterious development discourse (Castree, 2013).

I will thus argue that the ways in which journalism in Thailand are constructing climate change issues are questionable. Climate change news coverage plays a significant role in sustaining the dominance of powerful institutions in Thailand, namely the government and national industry, who control the distribution of natural resources. There are thus numerous superficial news reports that mention "climate change" and "global warming." It seems that journalists do not provide the reader with "climate change news"—defined as a story that offers facts and information regarding climate change, causation, and specific environmental effects in local settings. On the contrary, journalism that sticks to the timeliness element induces the number of news *about* climate change and frame climate change as an international political story as opposed to a locally relevant issue with a complex history. Regarding this situation, journalism practices in Thailand play a vital role in shaping climate change temporalities in the Thai public sphere whereby national and global time are elevated through Western market ideologies and local time is cut from news reports.

Marginalized people's rights and climate justice

Central to the situation described above, I argue that there is a temporal discontinuity of climate change in national news coverage that suppresses community and local issues of climate justice. The representations of climate

change risks are defined by state officials and international experts only. The work of journalism, in particular, journalistic values, namely, newsworthiness and established news narratives, primarily work to reproduce climate change as a global agenda through a conflict news frame. Beck (2009, p. 4) argues that the definition of environmental risk can be transformed globally into diverse representations:

> global risks open up a complex moral and political space of responsibility in which the others are present and absent, near and far, and in which actions are neither good nor evil, only more or less risky. The meanings of proximity, reciprocity, dignity, justice and trust are transformed within this horizon of expectation of global risks.

Following this, the definition of climate change found in Thai news coverage is similarly transformed into a global risk above all else. On the contrary, journalism practices limit the voice of local communities and their critiques of national development and state environmental policies. Although climate change is a prime cause of the acceleration of environmental risks in local communities nationwide, this fact is not contextualized in Thai news coverage because of the temporal discontinuity of the global and local scales. Therefore, the transformation of climate change into a global risk minimizes local environmental problems across Thai news and reflects how journalism plays a part in an "ecological neo-imperialism" (Beck, 1999).

To clarify, the western-capitalist ideology that leads to unjust systems of environmental management results in dire situations for local communities, especially historically marginalized and ethnic people. However, the dispute between local peoples and powerful institutions is rarely clarified in news coverage in national news media because it does not fit within predominant news narratives and values. For example, the conflict between the Karen people, whose habitat is in a national forest conservation area, and the state has been ongoing since 1964 when the government decided to issue the National Reserved Forest Act, B.E. 2507, and is therefore not "urgent" or "timely" because of its "longue durée." Nixon (2011) proposes that journalistic standards, mainly timeliness as a news value, hinder environmental news because modern environmental problems usually stem from unjust development policies. Therefore, environmental problems that are violently affecting marginalized people or "the poor" but lack the sense of urgency are excluded from the attention of news media. In terms of the Karen people in Thailand, the series of negotiations as well as the violent confrontations between the state personnel and the Karen people have been taking place for decades with no agreeable solutions. While the conflicts are on the news agenda, the coverage does not shape constructive debates about policies of environmental justice. This is problematic because the violation of rights and environmental injustices of the state are an increasing danger to the local communities compounded by the increasing risks of climate change. Despite this fact, news coverage prioritizes other agendas of climate

change, especially green capitalism and sustainable development, over other urgent issues of the climate crisis such as the resettlement management for ethnic people, as well as the uncertainty of land destruction from climate change in these new locations.

Since climate change risks are transformed into global risks above local environmental problems, the fact that nationwide communities have been facing harsh environmental situations is hardly reported as one of the risks of climate change. On the contrary, environmental disasters are reported in association with overt news angles, for example, dramatizing events in remote areas, as well as environmental crimes. The inert nature of climate change and how it impacts on the ecological system is not compatible with the timeliness news value. Therefore, connecting and investigating the impact of climate change as a cause of local environmental disasters in the present poses a challenge for the news media. News narratives cannot illustrate the linkage between climate change as a cause, on-going destruction of ecological systems, and the risks of harsh environmental disasters. Therefore, news coverage does not contribute to substantial knowledge about climate change because of the temporal discontinuity in climate change journalism. In relation to this problem, news narratives of environmental disasters thus often employ dramatic rhetoric that victimize lay people as the "losers" in environmental conflicts, while the powerful institutions are framed as the powerful villains that cause environmental injustices (Phiphitkul, 1994). I argue that framing environmental news stories in this way increases newsworthiness, but discourages opportunity to contextualize climate change risks in news reports. Importantly, this news narrative does not acknowledge local communities as dynamic actors who maintain the capability to adapt themselves to climate crises if allowed the authority and support to do so. In order to reach a just and equitable society, enhancing the ability for communities to adapt to climate change as well as to mitigate its further advance in the present is vital for establishing a democratic and resilient society.

However, the news narrative that victimizes local people may also discourage the empowerment of citizens, especially ethnic groups and Indigenous groups who have been suffering from unjust development plans. This news narrative implies that local people are presented as passive and without essential knowledges required to survive climate change. They require the superior entities, for example, the government and the international organizations, to lend particular support. This representation of the local people appears in news language, text and images (Dhiensawadkij, 2018). But this representation is not totally accurate. In fact, vernacular tactics and local inventions are utilized by local people, especially those in the agricultural sector, to survive unstable environmental situations. Since disrupting environmental conditions affect their life sustenance, dealing with the destruction of ecology is an urgent matter. Therefore, sharing information regarding this important issue does not merely help a person or a community, but it is essential to increase climate change resilience in nationwide communities. Nevertheless, journalism fails to share different forms of climate change knowledge beyond the official state and market sources. I argue that

since the environmental news beat in the legacy news media was closed long ago, Thai newsrooms are struggling to change and improve. So, the victim vs villain narrative that has been utilized in reporting environmental conflicts since the golden era of environmental news beat is applied to climate change issues despite its potential problems. Local experiences and knowledges are therefore erased in favour of official state and international "expertise."

The paradox of being objective versus voicing "environmental violence"

Environmental conservation ideology in Thai society is supported by several factors. The ideology fundamentally aligns with the combination of three major religions in the country, namely, Buddhism, Hinduism, and Animism each of which contains the belief in sacred spirits resided in nature. Importantly, forest conservation was romanticized in 1982 when national television broadcast the speech of Queen Sirikit that mentioned "if His Majesty the King is water, I would be the forest. The forest that is faithful to the water. If His Majesty the King builds a reservoir, I would plant a forest" (Department of Water Resource, n.d.) This context ties environmental conservation ideology with nationalism and the public thus values conservation forest areas as a "national heritage." In fact, state tourism gains large amounts of yearly incomes from conservation areas. In 2017, the government earns THB 2,700 million from national conservation park entrance fees (Thai PBS, 2019). With regard to this, ethnic communities whose habitats are located in the national conservation parks are accused of damaging the forest, regardless of whether they are Indigenous people who own rights to stay in their locality (Krajachan, 2007). Obviously, the dispute over land ownership highlights the issue of environmental justice and state violence against Indigenous peoples. However, reporters usually frame such incidents through a conflict news narrative. These conflict stories that are episodically reported represent the viewpoint that either the state or the ethnic community is the villain in national forest conservation. Focusing on violence and unrest leaves out essential facts regarding the dilemma of preserving the forest versus respecting human rights. Although reporting violent situations increases public awareness of and interest in environmental conservation, the contexts of this discord are buried under the image of conflict. Moreover, these conflict news stories fail to discuss the first-hand concerns of hill tribes who are portrayed as "the others," "uncivilized," and the people who destroy the forest for their own interests (Krajachan, 2007). This myth appeared in the country after WWII, when nationalistic ideology was strengthened by the government, and eventually discouraged public understanding of forest management. Accordingly, news discourse limits public understanding of the issue of forest conservation and inhibits an informed public debate.

James David Fahn reflects his experience in working as an environmental news editor in Thailand during the economic boom and discusses how reporting the problems of forest management between the state and the communities is always a complicated matter. The problem does not merely exist on the national level but also concerns international relations, for example, the logging dispute

between the Myanmar government and "Karenni National Progressive Party: KNPP," the independent ethnic group located between the borders of Myanmar and Thailand. While the KNPP earned money from logs smuggled to Thailand in order to support their independent troops, the Myanmar government battled to take over the trading. This smuggling was backed up by a powerful politician in Thailand who agreed to deal with whoever offered the lowest price, either the Myanmar government or the KNPP. Reporting such incidents requires more than news tips and first-hand experiences of the reporter because news credibility is defined by hard facts and balanced viewpoints. As a consequence, a reporter inevitably rethinks particular dilemmas between supporting the natural preservation versus reserving the rights to continue people's culture. Fahn underlines this challenge: "How was I going to live up to that promise (to KNPP) and still fulfil my obligations as an unbiased reporter? Frankly, there was no way to do it […] Don't pretend to be fair when you can't be" (Fahn, 2003, p. 140). As Hallin (1992) argues that the inverted pyramid structure is incapable of representing the truth, conflict narratives in hard news have become an obstacle in presenting the environmental truth that contribute to environmental justice in Thailand. Some reporters thus insist that they are more comfortable with writing a feature than complying with hard news formats when working on environmental issues (Dhiensawadkij, 2018). Regarding this, reporters are inevitably facing a dilemma of choosing between the environmental justice and the journalistic norms of balance and objectivity. To avoid this paradox, a journalist might exploit a conflict news frame and an event-oriented frame in environmental news reporting.

The necessity to rethink the entire process of newsgathering

The discussions so far in this chapter point to the idea that the fundamental challenge in climate change journalism in Thailand lies in both journalistic practices and the business model of a capitalist news industry. While the sense of urgency regarding the climate crisis and the attention of global media can increase the frequency of climate change news coverage in Thailand, news discourses do not pay attention to climate justice in the country because journalists need to deal with tight deadlines. Producing investigative news reports requires resources and time—two things many Thai newsrooms do not have ample supplies of. Journalists thus tend to stick to reporting through established news frames and citing powerful "official" news sources for quotes or to quickly verify environmental facts. This "web of facticity" (Tuchman, 1980) technique results in the prevalence of managerial discourse from official state new sources and international experts.

Moreover, the necessity to minimize the cost and increase the productivity of news significantly determines news policy and newsgathering process enforced by the editorial board (Manning, 2001). The topical specialization structure of news departments, which aims to increase productivity in newsgathering, has become a "structural control" (Dhiensawadkij, 2018, pp. 209–211) over environmental news reporting. This structure increases source

dependency and limits the opportunity to engage with environmental aspects in news stories reported daily (Paosri, 2015, cited in Dhiensawadkij, 2018, pp. 210–211): The news reporter in the news bureau at the Ministry of Health, explains that "crossing the line" in a newsroom is unacceptable for the profession. She wrote:

> Every reporter in my newspaper has been assigned to a specific news bureau. However, I am interested in environmental issues, so I always seek a way to write environmental news. Luckily, no one really writes these kinds of stories in the newspaper currently, so I am not in trouble.

Paosri was later allowed to transfer to "the article and feature" department more "compatible" with writing environmental stories in Thailand than the main section of the newspaper. This case is similar to some environmental journalists who preferred to work as citizen journalists rather than as professional journalists in traditional news organizations in Thailand. By the time that environmental journalism in traditional news organizations declined, the Environmental Journalist Club was established as one of the missions of the Thai Journalists Association. The journalist members of the Club, volunteer to provide environmental news stories, features, and articles to be published on www.greennews.agency. This phenomenon indicates particular changes in journalism that are essential to the survival of the profession in Thailand. Zelizer (2017) suggests the need to rethink the work of journalism to navigate the profession from the limitation of traditional news organizations. The rise of digital platforms in environmental news reporting in Thailand is evidence of the need for journalists to free themselves from traditional journalistic norms of print media as well as from the marketing limitations of traditional news business.

Nixon (2011, p. 3) argues for the necessity to reconsider traditional news values and news frames because these values and frames obstruct journalists from engaging with the violence that "the poor" are facing in environmental crises. Following this, I apply his idea of "slow violence" to the profession of environmental journalism itself. Regarding the context of Thailand, it is not merely the marginalized groups or "the poor" that need to endure unjust systems in environmental and natural resource management in the long run, while their voices have been downplayed in the news media. Studies of environmental journalism in Thailand (Salathong, 2011; Dhiensawadkij, 2018) imply that the structure of news organizations does not contribute to the debate about environmental justice in the public sphere. Importantly, this structure regulates how each journalist performs routine tasks. In this sense, the journalist is the agent who is directly facing the contradiction between complying with the "structural control" in the news departments versus obligations to the professional ideology. In other words, the structure of news departments incentivizes productivity above providing the environmental truth. This situation signifies difficulties innate to a private, capitalistic news industry. I thus argue that while the works of news media significantly enhances the dominance of a capitalist market ideology

in the country, the economy of the news industry also violently impinges on the work of environmental journalists. This situation signifies "structural violence" (Galtung, 1969) meaning that social structures prevent particular groups from accessing basic needs. In the case of environmental journalists, they cannot fulfil the core idea of being a journalist because the structure of news organizations in a capitalist marketplace does not allow it. This structural violence increasingly damages the profession. The stronger and wealthier a traditional news organization is, the more violent are the conditions for environmental journalists. Furthermore, the effects of the climate crisis are increasingly obvious unlike before. The dissonance between the reality of journalism as a profession in private media companies and the principles of journalistic integrity is clear.

In Thailand, the journalists are blamed for failing to conserve journalistic standards and ethics in reporting environmental news stories. Especially, they are blamed for lacking sufficient environmental science knowledge and this is repeatedly elevated as the main challenge for reporting climate change news (Fahn, 2008; Salathong, 2011; Kasemwit, 2008). Stocking and Holstein (2009) argue that the performance of journalists in climate change news reporting depends on how they perceive their professional role. In terms of climate change journalism in Thailand, I argue that the journalists are aware of their role in shaping a climate literate society. Nevertheless, they are subject to the pressures of performing two contradictory roles. Arguably, journalists are expected from their news departments to perform newswork quickly and efficiently, but this is frequently in contrast to the need of a journalist to investigate in-depth environmental facts to fulfil their role as the fourth estate institution. This pressure from working conditions is slowly increasing, as well as the alarming rate of environmental destruction in the country. Environmental journalism in traditional news media thus suffers more from the long-run hidden violence in the business model. The repercussion of this resurfaces as a downturn in environmental journalism in traditional news organizations and the rise of environmental journalism on social media. In this sense, improving climate change journalism requires rethinking the system of news production in traditional news organizations and the entire structure of news departments. This is because the capitalist market in Thailand impacts directly on the integrity of the profession in the area of environment journalism. In fact, the problem embedded in the business model of traditional news media is an ongoing crisis for environmental journalism globally (Cox, 2010). However, this perspective receives less attention from scholars in Thailand who tend to focus on journalism ethics and scientific literacy rather than applying a critical, political-economic perspective.

Conclusion

Climate change journalism in Thailand does not pay much attention to issues of environmental justice. Climate change discourse in the news increases the dominance of powerful stakeholders in response to climate change, especially state and industry officials. As a consequence, climate change is portrayed as a global

issue in news coverage in Thailand—a trend amplified during the downturn of environmental journalism in traditional news organizations. Episodic framing and conflict news narratives play vital parts in shaping the representation of climate change and both disregard environmental problems at the local level. Eventually, climate change issues are exploited to support the official claims of government natural resource management policy. In light of this, climate change discourse in news media bolster Western market ideologies rather than covering local environmental justice concerns. This situation shows how climate journalism in Thailand emphasizes the global and future aspect of climate change, but neglects the past and the present of climate change within Thai society. According to Beck (2009), this illustrates an ecological neo-imperialism that obstructs climate equity and justice in developing countries. While Nixon (2011) focuses on news values that discourage unobservable environmental violence, I further problematize the pressure on the journalistic profession in traditional news organization by applying the concept of "slow violence" to environmental journalism itself. The contradictory obligations between being a professional journalist versus complying with deadlines and assigned topics forces a journalist to navigate a difficult dilemma. This pressure eventually led to the decline of environmental journalism in traditional news organizations in Thailand—the consequences of which are severe, and increasingly so, for environmental justice within Thailand.

Notes

1 Excerpt from "นายกชูลดโลกร้อนบนเวทีปารีส" (NaYok Choo Lokron Bon Watee Paris), Krungthepturakit newspaper, 25 November 2015, p. 15.
2 Excerpt from "GR: วัดอุณหภูมิโลก ไทยร่วมขบวนลดก๊าซเรือนกระจก 20–25%" (GR: Wad Unapum Lok,Thai Ruam Kabuan Lod Gas Ruen Krajok 20–25%) Green Report: Krunghtepturakit newspaper, 24 December 2015, p. 8.

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Part II
Ecological loss

7 Climate change and the Great Barrier Reef

Environmental protest, climate science, and new/s media

Kerrie Foxwell-Norton and Claire Konkes

Introduction

In 2016, a group of 56 Australian scientists, crowdfunded by the Climate Council,[1] bought a full-page advertisement in *The Courier-Mail*. This newspaper is a major metropolitan daily reaching across the Australian state of Queensland, which shares more than 2,000 kilometres of coastline with the Great Barrier Reef. The advertisement had a clear message: a diver in the distance swimming across clearly bleached coral accompanied by the words in bold white capitals: "CLIMATE CHANGE IS DESTROYING OUR REEFS. WE MUST PHASE OUT COAL." The statement began:

> We, the undersigned, have collectively devoted over 1200 years studying climate change, marine ecosystems and the Reef. We know that the burning of fossil fuels is severely damaging our Great Barrier Reef. This is directly threatening a major economic resource. The World Heritage listed Great Barrier Reef earns multiple billions for the economy and provides jobs to tens of thousands of Australians.

The frustration of the undersigned scientists was unmistakable; their desire to link the relation between fossil fuels, climate change, and the Reef was explicit. As was their sense of time—both in their justification of expertise and the sense of urgency. The scientists' actions follow a history of environmental activism to save the Reef using media to mobilize the public for political action since the 1960s. That these scientists had to pay to have their expert perspective in the newspaper suggests enduring and troubling exclusion of Australian science from Great Barrier Reef news.

Appreciating that social movements are temporally located or "of their time" (Gillan, 2020, p. 516), we juxtapose earlier campaigns with the contemporary terrain of Reef politics and public communication over a time marked by extraordinary growth in public awareness of environmental issues. The catalyst for both campaigns was the threat of mining industry impacts on the Reef's ecology and the future prosperity of human communities therein. These two campaigns provide snapshots of attempts to communicate the Reef's ecological significance

and insight into the relations between Reef science, environmental protest, media and politics. Later urgent attempts to again communicate the Reef's fragile ecology collides with the timelessness of its geological lifespan, the immediacy of new/s media and the urgency of human action on climate changes. In comparing these two campaigns, we begin to identify transformations—or not—between two extraordinary periods in the Reef's history, as a doyen of both environmental promise and demise in the face on ongoing industry pressures. The Reef is a case study in communication networks, providing a "detailed examination of a single example" (Flyvberg, 2004, p. 420) that illuminates the continuities and discontinuities of the Reef in public communication and debate. Defining what constitutes the Reef and, more particularly, its resilience to human activity is the site of discursive conflict in Australian polity and media. As Allan and colleagues (2000, p. 1) observed about environmental conflict generally, our understanding of the Reef and our connection to it is "constantly being drawn and redrawn in relation to the social hierarchies of time, space and place." Here we explore these shifting temporal and spatial hierarchies at two critical junctures in efforts to save and protect the Great Barrier Reef.

The placement of the advertisement above illustrates a dissonance we have observed in the evolution of science, media and environmental policy in Australia. We begin with an overview of climate change and the Australian media, before focusing on the literature that has investigated Australian news media content on the Reef. Distinguishing between mediation and mediatization, a process that acknowledges the radical shift in how media can influence political, social and cultural change, we draw on Hutchins and Lester's conceptualization of "mediatized environmental protest" (Hutchins and Lester, 2015) but add scientists and scientific organizations to the model. In doing so, we locate scientists and scientific institutions as social sphere/s made up of individuals and organizations with the capacity to enact environmental conflict, as the advertisement above attests. From this framework, we explore the impact of nuances in communication and media practices in two campaign periods that bookend the history of Reef protest, highlighting Australian news media's role in initially, and almost collectively, promoting the Reef as a natural icon deserving protection before challenging such claims in later years. While media compresses temporal and geographic constraints, our enthusiasm for the possibilities heralded by global communication and media is tempered by the recognition of salient impediments to change. As such, we conclude with critical questions about the power of media to communicate the Reef in ways that will foster action on climate change.

Australian media, climate change communication, and the Reef

Climate change communication in a nation so ensconced in the mining and fossil fuel industry represents a considerable challenge. Australian national identity is steeped in ideas of a wealth of natural resources and a deep sense of pride at the extent of our "nature"—which presents a fundamental paradox at the heart of Australian responses to climate change and environmental issues (Foxwell-

Norton, 2017, p. 146). Alongside this cultural paradox, the political and economic machinations continue to apply pressure on climate change communication, most notably following Australia's late signing of the Kyoto Protocol in 2007 (which was the first formal action of newly elected Labor Prime Minister Kevin Rudd), which began a period of rampant party and leadership instability and electoral losses. Dubbed as the "climate wars," this period was fueled by the relationship between Australian governments, the nation's fossil fuel industry and sections of Australian media (see McKnight and Hobbs, 2017). As Canadian journalist Naomi Klein commented, "In Canada I can't tell where the oil industry ends and the government begins and in Australia the same is true when it comes to coal" (Milman, 2015).

Early work by Bacon (2011, 2013) found Australian media coverage was biased towards climate scepticism and a preponderance of political and business sources, particularly those related to fossil fuel-dependent industries. Bacon (2011) found Australian civil society sources—including unions, NGOs, think tanks, activists, members of the public, religious spokespeople, scientists, and academics—were trumped by business sources in the reporting of climate change policy. Bacon (2013) mirrored these findings with international trends at the time and found climate science scepticism receiving substantial and often favourable exposure (Bacon, 2013, p. 15). Lester and McGaurr's (2013) analysis of Australia newspaper coverage of the IPCC's first two reports in 2007, IPCC's SREX Report in 2012 and the reporting of Arctic sea ice decline in the mainstream corporate press *The Australian*, the *Sydney Morning Herald* and the *Herald Sun* found similar results, noting also that Australian articles were least likely to temper uncertainty with references to increasing scientific certainty (McGaurr and Lester, 2013). McKnight (2010, p. 703), examining the climate change coverage of News Corp's *The Australian* during the period 1997–2007, noted that while its editorials tended to be sceptical, its articles and columns were more sharply anti-climate science, depicting science as "political belief" and "orthodoxy" and therefore another threat to free speech and diversity from political correctness. Jaspal, Nerlich, and van Vuuren (2016) found in their 25-year survey of mainstream Australian press coverage that the label "greenhouse sceptic" was adopted as a positive label by climate science denialists who then positioned mainstream climate science as an alarmist, religious cult. In this environment, the reporting of international climate change events has been particularly insular. In his comparison of the COP16 conference in Copenhagen and the COP17 conference in Durban, Chubb (2012) found that domestic political voices commandeered reporting, concluding that "those powerful elements of the business community whose leaders battled the carbon tax so bitterly fought side by side with the anti-science forces in the nations political leadership and media" (2012, p. 193; see also Chubb and Bacon, 2010). In Australia's climate wars, then, science as a cultural value can be seen to be pilloried by those with vested interests in maintaining the status quo (Adam, 1998) and the Australian news media's role therein.

Any reading of Australian news media must note the concentration of media ownership where News Corp and its subsidiaries own a substantial portion—

currently News Corp own over 60 percent of Australian newspaper interests alongside radio and television interests—and, of course, its leviathan of global media assets. Despite Rupert Murdoch's declaration in 2007 that News Corp would become climate-neutral and his endorsement of climate science (ABC, 2007), many employees seem to have missed the memo. Murdoch's son, James Murdoch, resigned early in 2020 citing frustration with the News Corp and Fox coverage of the climate crisis, particularly the "ongoing denial among the news outlets in Australia, given obvious evidence to the contrary" (Waterson, 2020). Recent research into climate change and media (Park et al., 2020) found that Australian consumers of Sky News Australia, Fox News, and commercial radio were more likely to think climate change is not a serious problem. In Australia, News Corp employs some of Australia's most vocal climate science deniers, including Andrew Bolt, Chris Kenny, and Rowan Dean. In contrast to this climate scepticism Forde (2017, 2019) draws our attention to *The Guardian*'s Australian edition and its Keep It in the Ground campaign. Forde (2019, pp. 85–86) finds that adopting a baseline position of climate change science as settled and the need for urgent action, led to advocacy journalism that sought social change and importantly, their audiences' capacity to participate in such change. Foxwell-Norton, (2015, 2017, 2018) also examined the potential role of locally based community media in fostering climate action and meaningful local responses to environmental issues. Her analysis of Australian independent media coverage of COP21 found a willingness to seek action on climate change and an elevation of marginal groups to Australian climate change discussions especially environmental movement organizations and the interests of neighbouring Small Island Developing States. In mainstream Australian media, reporting of international climate change events has been particularly insular, focusing on domestic interests.

International media coverage of the Reef has challenged the insularity of Australian climate change reporting. The popularity of the Reef with international tourists, coupled with its World Heritage Listing, and related concerns over Reef health in the wake of successive coral bleaching events have brought international scrutiny to domestic Reef politics. Lester's (2019) excavation of the network and flows of local to global communication and media traces how the spectacle of Reef protest arrives to audiences near and far—and importantly how industry and governments expect and navigate these local and transnational publics. The impact of these transnational flows has also been observed by Lankester and colleagues (2015) in their analysis of the way "risk" was reported in debates about a controversial proposal to dredge sections of the southern Reef to allow port expansion. They found that news coverage started with local sources expressing concerns for local livelihoods and environments before broadening to sources from across Australia expressing concerns that an expanding thermal coal industry was a risk to the World Heritage Listing and tourism (2015, p. 159). The expansion of infrastructure development in the Galillee Basin, inland from the Reef, has been a theme in recent Reef media research, especially the Carmichael coalmine project led by the Indian mining company, Adani. Konkes (2018, p. 200) observes how lawsuits aimed at stopping the development of the Adani mine were part of a

broader campaign to achieve political and public support for action on climate change. Hook and colleagues (2017) outline how political discourses in media illuminate Australia's understanding of its role and responsibility for the pollution consequences of coal, turning to the Reef to show how blame can be distributed across complex global networks of communications, trade and politics. After two well-publicized mass bleaching events in 2016 and 2017, the transnational sense of concern for its future morphed to the extent that sections of the media encouraged "last chance visits" (see McGaurr and Lester, 2018), which were found to discourage engagement with efforts to mitigate climate change impacts on the Reef (Eagle et al, 2018).

The emergence of an increasingly transnational mediatized Reef politics over time is explored in our previous work (Foxwell-Norton and Konkes, 2019) that investigated two critical and controversial policy moments in the protection of the Reef—the 1981 inscription on the World Heritage List and the 2012 threat to place the Reef on the World Heritage In Danger list—in Australian local, regional, and national news media. While 1981 might be a time where mass media were more likely to mediate between activists and formal politics, the latter period revealed the processes of mediatization at play. However, observing the selection of sources over these periods, we concluded that

> since the earliest campaigns to protect the Reef, environmental conflict have largely been enacted in the political sphere at local, state and national levels and contemporary news reporting continues to silence the perspectives of scientists, Aboriginal and Torres Strait Islander peoples, ENGOs and other activists.
>
> (Foxwell-Norton and Konkes, 2019, p. 18)

As the advertisement at the start of this chapter attests, and as we argue below, scientists and scientific organizations remain minor sources in news coverage about the Reef and are observed seeking alternative means to add their voice to debates about the Reef.

Our times are marked not only by both our extraordinary capacity to measure and predict risk, but also to the extent to which this knowledge collapses "under the weight of our collective inability to conceptualize the consequences" (van Loon 2000, p. 174). In place of a better vision of the future, the rhetoric in recent years has turned to the apocalyptic, which contains "a catastrophic telos (endpoint) somewhere in the future" (Brummett, 1991). Such narratives are preoccupied with an encroaching sense of some imagined end times and, as McNeish (2017, p. 1042) suggests, "at odds with the official discourses of liberal progress and is disruptive of the rational objective temporality that is required in the world of capital and wage labour." As one of Australia's oldest and most enduring campaigns, the fight to protect the Reef continues to demand we resist the linear temporality embedded in both narratives of infinite progress and catastrophic endings. Indeed we are required to resist translating the predictions

born of scientific modelling into self-fulfilling prophecy if we wish to meet the challenge of addressing the challenges that the Reef faces.

Mediatized environmental conflict, scientists, and the public sphere

Environmental protest has long been an exchange of transnational and local flows and forces (Kraidy and Murphy 2008; Lester, 2016, p. 793). Indeed, these events are "moments in time," frozen in time and space, where the potential for change becomes visible through the processes of media (Adam 1998). The Reef as a site of environmental and, more recently, climate change protest illuminates key characteristics of mediatization, which takes different forms in different domains, and with implications as a societal "meta-process" yet to be articulated clearly and/or tested thoroughly (Lunt and Livingstone, 2016, p. 467). Broadly, the concept recognizes the role of media in the formation and distribution of public opinion and debate (Schoenbach and Becker, 1995) and recognizes that social, cultural, and institutional settings are increasingly subject to far-reaching media processes and logics (Cottle, 2006; Hutchins and Lester, 2015). Strömbäck (2008) distinguishes mediatization from mediation, arguing the latter is a static condition of earlier periods where mass media were the main conduit of information exchange between the citizenry and political actors, institutions, and events. Mediatization, in contrast, is a process distinguished by the degree to which politics is distanced and driven by a media logic Strömbäck (2008, p. 234). Since the early campaign to Save the Reef to more recent campaigns, we can see a shift to an increasing "media logic" (Altheide and Snow, 1979) by key actors in Reef politics.

Hutchins and Lester (2015) apply these ideas to contemporary environmental communication practices in their theory of the enactment of mediatized environmental conflict in which they identify four pillars—activists strategies and campaigns; journalistic practices and news reporting; formal politics and decision-making processes; and industry activities and trade—that coalesce to enact moments of mediatized environmental conflict. Interaction between two or more of these pillars is identified as "switching points" to describe "the spaces and sites where interlocking networks of media, political, and economic power meet and where environmental conflict is enacted" (2015, p. 339). Thompson's (2005) idea of "mediated visibility" is key here, particularly the capacity for online media to wrest power from legacy media and traditional channels of communication in order to influence governments and industry. The notion of "switching points" can be seen as instances of vertical temporality, where the horizontal temporalities of various actors, or pillars, collide, and "punctuate the cultural and material flows of interaction" (Gillan, 2020, p. 516). Here Gillan reminds us that, patterns of interaction evolve over time and an appreciation for temporality locates any protest within its socio-political context and, thus, provides a lens to observe continuities as well as ruptures across time.

To Hutchins and Lester's model, we argue that scientists and scientific organizations are a fifth pillar because science and scientific organizations are

increasingly participating in, and enacting mediatized environmental conflict about the Reef. Scientific knowledge and expertise increasingly defines threats and risks in public sphere debates, provides the foundation for news media and/or public controversy and conflict in disputes over "facts," and actively participates in commercial activity including fundraising, lobbying and participation in media and publicity campaigns, including social media. This public engagement is, in part, a consequence of the popularization and commercialization of science in recent times and, parallel with the impact of media logic, can fairly be described as the "mediatisation of science" (Maeseele, 2013). Here, public relations, image management, marketing and other strategic communication position "popular science" as both evident and necessary. Competition for limited funding adds increasing urgency and ballast to the careful navigation of good science news.

Over time, we (Foxwell-Norton and Konkes, 2019) observed the different temporalities informing campaigns and their switching points. In 1981, news coverage of the announcement of World Heritage Listing reflected a moment when political debate was focused on addressing the ambiguity, or absence, of legal and constitutional authority required to protect (or exploit) the Reef. Instruments, such as the World Heritage Convention, were relatively innovative and simply conveyed, and thus deemed newsworthy. In 1981 too, global warming and the associated debates about fossil fuels had not yet triggered a response from industry but the early environmental consequences of oil and gas exploration were under scrutiny. Thirty years later, things had changed. In 2012, journalists were less enamoured with protest and the myriad stakeholders in debates about protecting the Reef which made campaign messaging more complex. Notably, compared to 1981, industry sources had joined with political voices to argue that protection was negotiable. In this space, and since then, the scientific perspective is barely visible enough to compete with the political.

Climate change communication, including that involving the Reef, epitomizes the challenge of having various temporal discourses at play. Scientists communicate climate urgency in terms of decades, if not centuries, alongside those in the political sphere who measure crises in terms of electoral cycles. The dissonance not only reminds us of the extent to which social time in industrialized society is decontextualized from nature (Adam 1998), but the dissonance also allows climate sceptics to deride scientists and others as alarmists. Taking Hutchins and Lester's model, and including scientists and science organizations as a "fifth pillar" allows us to better understand how such dissonance remains at the heart of media and communication about the Reef.

Protest over time: from Save the Reef to Fight for our Reef

The first campaign to save the Reef began in 1967 with plans to drill for limestone and fossil fuels and marked the beginning of efforts to secure its protection (Bowen and Bowen, 2002; Clare, 1971; Evans, 2007; Hutton and Connors, 1999; McCalman 2013; Wright, 2014). Plans to mine a little known coral atoll called

Ellison Reef for lime was supported by the government; even the University of Queensland maintained that Ellison Reef was dead. Three people, John Büsst, Len Webb, and Judith Wright campaigned to save Ellison Reef on the grounds that it was "alive" and part of a lively ecosystem (McCalman 2013) and were notably joined by Australian journalist Barry Wain whose "faithful coverage" was critical to the activist's campaign (Wright, 2014 [1977]). The subsequent battle and discovery of "life" on Ellison Reef drove media coverage about the case (Lloyd et al., 2017) and established a role for Australia's early conservation movement to meet the challenge of communicating ecology to those more interested in economic development. While biologists were restrained in their response to initial proposals to mine the Reef (Bowen and Bowen, 2002, p. 328), politicians leveraged disciplinary tensions between Australian ecologists and geologists to further their development agenda. Geologists accelerated the likelihood of mining the Reef while ecologists fought for the inverse and the recognition of their discipline as legitimate and authoritative in Reef matters (see McCalman, 2013, p. 242). In 1968, the Government appointed an American geologist, Harry Ladd, to survey the Reef's commercial potential. His final report described the likelihood of gas and oil discoveries as "promising" and he recommended that "non-living" reefs be used for fertilizer and cement manufacture (Clare, 1971, pp. 114–115). When Ladd's report was released, Busst appealed to Wain to report it as "scientific nonsense" (McCalman, 2013, p. 242). Throughout the 1960s, Australian scientists joined forces with protesters to raise awareness of the potential threats to the Great Barrier Reef, especially evident in the work of ecologists who argued for the connectedness of the entire reef ecosystem.

There are striking similarities between these early campaigns and contemporary debates about the Reef (see Foxwell Norton and Konkes, 2019). The ongoing threat of mining industries persists, alongside the tensions between tourism and mining industries (see McGaurr and Lester, 2018). Notably, in 2012, the World Heritage Centre's threat to place the Reef on its "In Danger" list in response to proposed mining and related infrastructure linked the survival of the Reef explicitly to the operation of the fossil fuel industries and their climate impacts. Principal among their concerns were proposals to develop the Galilee Coal Basin and liquid natural gas (LNG) projects, alongside the substantial development and expansion of infrastructure to support these new developments, including port construction, seabed dredging, and dumping to enable increased shipping traffic and rail development.

In 2011, the Fight for the Reef campaign began targeting these "megamines" and large-scale industrial projects of Australia's coal industry and the campaign soon morphed into the Fight for our Reef campaign, as other groups, including the #StopAdani Alliance targeting the development of the Adani's Carmichael Mine project, joined in. #StopAdani is reportedly both well-funded and part of a global alliance of organizations targeting the coal industry and new coal mines around the world (Murphy, 2017). ENGOs and activists have targeted the international trade and finance routes that support proposed mining developments bringing international media attention and

celebrity to local Australian communities, particularly those that border the Reef (Lester, 2019). Contemporary protest strategies bypass governments and policy makers, evident in an international consortium of environmental groups targeting Australia's coal industry. According to their strategic report, "leaked" to news media in early 2012, this group aims to "disrupt and delay" key projects and infrastructure while gradually eroding public and political support for the [coal] industry (Hepburn et al., 2011, p. 3). Since then, lawsuits challenging government approval for the Adani mine, led by local ENGOs, have been used to not only disrupt the mine, but also to draw attention to the complicity of government decision-making that privileges the coal industry over protecting the natural values of the Great Barrier Reef (Konkes, 2017).

Over time, the perspective of scientists has come to the fore in debates about the Reef, especially in relation to climate change and the expansion and impacts of proposed coal mining operations on the Reef. During 2016 and 2017, consecutive coral bleaching events on the Reef as a direct result of rising sea temperatures heightened the visibility of scientists who defined the threats and provided the expertise and knowledge to support the urgency of protest claims. As some indication, during the 2016 bleaching event, Australian coral reef scientist, Dr Charlie Veron reported that he was interviewed 61 times (2017, p. 292). It was in this context that scientists were called on to highlight the fragility of the Reef to climate change, receiving national and international media attention that further accentuated the environmental consequences of climate change (Salleh, 2017). In April 2016, Australian reef scientist Professor Terry Hughes tweeted that: "I showed the results of aerial surveys of #bleaching on the #GreatBarrierReef to my students, And then we wept." This was retweeted 4,000 times and was widely reported in news media. The full-page advertisement that began this chapter appeared a few days later.

Of course, the scientists plea for action to "phase out coal" was disputed—in this case most effectively by science itself. Throughout 2016, Hughes and fellow James Cook University physicist, Peter Ridd, clashed on the accuracy of Reef science. Ridd raised his concerns with a journalist at *The Courier Mail*, and subsequently appeared on Sky News and throughout Australian news media. Ridd's attack on Reef science has been ongoing, as have public conflict and lawsuits challenging his dismissal from James Cook University in the wake of his actions (see Konkes and Foxwell-Norton, 2021). The conflict between scientists about Reef health was again well reported in local and global news. Reporting the Reef's premature death, travel and food writer Rowan Jacobsen (2016) begun a tsunami of global media activity when he wrote in the US outdoor recreational magazine, *Outside*: "The Great Barrier Reef of Australia passed away in 2016 after a long illness. It was 25 million years old." This *Obituary* appeared online on October 11 and "news" of the Reef's demise was taken literally by journalists and social media users around the world. In the United Kingdom Murdoch's *Sun* newspaper (Gillespie, 2016) reported that "the Great Barrier Reef has been declared dead by scientists." Reminiscent of earlier threats to the Reef, scientists, politicians, and

especially the travel industries soon joined the fray variously responding to the veracity of a "dead reef," which crystallized a larger temporal shock of imaging that humanity could kill off such an enormous ecosystem in our lifetimes or that we had missed a moment, the tipping point, where humanity could reverse-engineer ecological demise. Australian politicians again capitalized on scientific disputes to further political agendas. A recent government inquiry into water quality on the Reef, called for in the wake of Peter Ridd's "roadshow" and funded by peak agricultural organization, AgForce, has again frustrated leading Australian scientists. Australia's former Chief Scientist, Ian Chubb, and colleagues lamented in an opinion piece for *The Guardian* that, "It is beyond regrettable when evidence is ignored or its weight diminished because it doesn't fit the apparently predetermined view of a couple of Senators" (Chubb et al., 2020). In many ways, their lament is modern Reef politics as usual, but this time the stakes are higher and a layer of global ecological threat and the politics therein pervade the Reef as bellwether for climate change and crisis. The politics of climate change action collide with the public nature of scientific disagreements, while industry interests parallel the climate change science uncertainty characteristic of Murdoch press in Australia and Australian governments. Of particular note is that scientists entered news media directly and via online and social media, creating their own communication strategies, still dependent though but not reliant on mainstream news media or protest organizations to bolster their visibility and authority.

Discussion: environmental protest, climate science, and media

In the late 1960s, journalists and news media were crucial to the publicity and visibility of conservation efforts, but more than 50 years later, news media has been transformed and supplanted by a communication network of traditional, online, and social media. This presents both salient and new opportunities and impediments to the efforts of conservationists, activists, and/or the scientists who raise alarms about the health and integrity of the Reef. The Reef's ascent from relative obscurity to global significance firstly as a natural wonder and, more recently, as an early victim of climate change, corresponds to the emergence of significant epochal trends that now link and distinguish historical periods. In the Reef, we find the early signals of what has become established elements of contemporary environmental politics and locations for the exchanges that inform mediatized environmental conflict: the rise of the modern environmental movement alongside the rise of ecology as a legitimate field of science, underpinning conservation and protection of the Reef as an entire ecosystem; the growth of concern about the impacts of industrial exploitation, especially mining; and the capacity of global communication networks to distribute, shape and participate in the mediatized environmental conflict about the Reef. Consistent in the history of Reef conflict has been the various vested interests, particularly the fossil fuel industry. For decades, mining and agriculture have been identified as two industries that put immediate pressure on the ecological integrity of the Reef. Fossil fuels (in

both burning and extraction) and the impact of agricultural runoff remain the key and contested threats to Reef health. Now fossil fuel exploration, extraction, and infrastructure remain key industrial processes that threaten the Reef and epitomize the significant connection of industrial production, practices, and proposed expansions to climate crises. The Reef thus shares a much longer history of navigating the threats of industrial production and related fossil fuel industries than recent climate change protests might suggest.

While some historical themes are salient, a key distinction of the current climate change debates is the changed capacity of the global communications and media industry. As Lester (2016, p. 800) concludes:

> A complicated story is unfolding; on the one hand, there are new complex and multidirectional flows of meanings, images and messages across the internet; on the other, we note the continued presence and viability of the old restraints to free flows of information that have always existed when it comes to environmental campaigns and concerns.

Reef scientists are both participants in, and witnesses to, environmental protests that have brought the Reef and its protection to the forefront of public consciousness. As well as entering a space defined and contested by others, these scientists bring their own temporalities, including their perspectives, practices and values, to the uneven exchange and flow found in contemporary communication networks.

The Save the Reef campaigners in the 1960s and 1970s were largely beholden to individual journalists and publications for a broader public presence, but the Fight for the Reef and #StopAdani campaigns have used the capacity to create their own channels of communication to subvert the structures and gatekeepers that epitomize the paradoxes of traditional media: as both enabling and stifling their voices. The potential for the Reef protests to mobilize populations through their communication networks are located and enacted here. Many techniques employed by the earlier campaign are still evident, including aiming for international reach and advertising in mainstream media, but the speed and scale of communication is unprecedented and bewildering in comparison (Foxwell-Norton and Lester, 2017). Strategic interventions and disruptions to established power enacted by ENGOs are infinitely more possible and powerful in our contemporary networked society (Foxwell-Norton and Lester, 2017). The stability of power relations that historically has defined environmental issues and debates, alongside legitimate or acceptable responses, is a relative casualty: governments, industry and scientists scamper to respond to communication and media not of their own making, or contribute to this increasingly chaotic flow of information. In the contest of definition, meaning, and political and economic power, abdicating from this communication process only leaves a vacuum for others to fill.

Scientists, scientific organizations, and the science communicator (see Burns, 2014) have emerged over the last 50 years to position themselves in the network society where "communication is power" (Castells, 2009). Recent

events in protest affirm that scientists have entered this new media landscape where their expertise (and its contest) is especially critical to defining climate change threats and increasingly susceptible to the hazards of climate change politics. Climate and other scientists are arguably ill-prepared for these new communication networks, with the rigor and formality of scientific method and debates confounded and as often confused by the relative lawlessness of politics where scientific knowledge is but one, often manipulated and/or mis-represented, source of authority and power (Lester and Foxwell-Norton, 2020). This frustration is palpable in the actions of our Reef scientists in funding their own advertisement, a blatant attempt to control the entry of science into public debates. Some of Australia's most eminent Reef scientists have acknowledged both the necessity and precarity of entry into media. Professor Ove Hoegh-Gulding (Braverman, 2018, p. 67) has commented that:

> Science needs to get out of its ivory tower. And that's not to say that we don't do good science, but we must communicate it to everyone … it's about getting outside our comfort zone and communicating our science effectively so that people understand the problems.

In his biography *Godfather of Coral*, Dr Charlie Veron comments that:

> It was the impending demise of coral reefs that turned me into a media tart. I felt I had little choice in this … Science had done its part in iden-tifying the path of destruction humanity is on: the job now is to get this message out to the wider worlds, by any means possible.
>
> (2017, p. 291)

In recognition of scientists and scientific organizations as an identifiable and substantial sphere of action, we have added it as a fifth pillar to the four pil-lars in mediatized environmental conflict identified by Hutchins and Lester (2015)—activists' strategies and campaigns; journalistic practices and news reporting; formal politics and decision-making processes; and industry activi-ties and trade. Within these parameters of mediatized environmental conflict, the potential to communicate climate change in terms of climate science, politics and protest is enormous, but there remains a sobering qualification. As the climate change communication research surveyed earlier indicates, communication networks are available to governments and organizations that are capable as much of stalling debate as they are of inciting change and action. But much remains the same, if not amplified at the current juncture in Reef protest, despite the potential of this "new" media landscape. Scientists and scientific organizations enter public sphere debates about the Reef in ways that are similar and distinctive to other actors in environmental con-flicts. At the current juncture, their role in defining the risks of climate chan-ges alongside adaptation and mitigation strategies is extraordinary and has made scientists and scientific disputes visible.

In this chapter we have tried to move away from accounts that frame these risks as happening to passive scientists and rather emphasized scientists and scientific organizations as active in mediatized environmental conflict. Compared to the 1960s, our Reef scientists enter a profoundly transformed landscape where their own actions are geared to media logics and processes. The evolution of science communication in Australia (see Burns, 2014) is testimony to the recognition that communication and media geared to public understanding and /or engagement is now a part of science. Murdock's (2017) shrewd observation that mediatization describes consequences not causes is useful here. That scientists now engage in media is the outcome of the commercialization and marketization of science, where it is a public good and so subject to the politics and vagaries of public and commercial funding and support—debates that now circulate in media. In the intervening half century between Reef conflicts, the "independent scientist" ideal is challenged (see Maeseele, 2013, p. 158) by what Cloud (2020) identifies as the "corrupted scientist archetype" who operates for political and/or financial gain. The benign, scientist, distant from the messy realms of political debate and controversy is a myth that no amount of science communication, geared as it is to correcting public information deficits (Metcalfe, 2019; Peters and Dunwoody, 2016) is likely to correct.

Conclusion: between hope and despair

Scientists, climate or otherwise, have struggled for visibility and impact in modern debates about the Reef—hence we began this chapter with reef scientists buying a full-page advertisement in a newspaper in a bid to gain some control of the mainstream media narrative. Campaigns against fossil fuels and mining to protect the Reef have a much longer history than the current focus on "climate change" would suggest. In half a century of campaigning for the Great Barrier Reef, global and local environmental policies designed to administer and protect the Reef have proliferated alongside the reach of corporate behemoths. Today, global environmental consciousness and transnational industrialism—the mining and tourism industries are especially relevant to the Reef—have become inextricably intertwined. In the shadow of climate change's catastrophic impacts on the Reef, and coral reefs everywhere, the contemporary conflict has redefined what it might mean to "save" the Reef. Key questions therefore relate to the indicative and the subjunctive, that is, the apparent and enduring facts of powerful structures and discourses typical of industrial society which exist alongside the potential of news and other media to foster and develop something capable of creating positive environmental futures for the Reef and its humans. In this and in the wake of the failure of scientists and sympathetic protests to incite necessary action on climate change, it may be prudent to drastically reconsider "science communication" and how scientists enter the realms of contemporary mediatized environmental conflict. Somewhat blunt and simplistic communication strategies like our Climate Council advertisement (that began this chapter) are expensive. Instead, such an attempt by scientists to engage with mainstream

media indicates, in both research and practice, a changing relationship between scientists and environmental movement organizations. The union between ecologists and environmental activists characteristic of early campaigns—arguably neglected by both in their pursuit of fossil fuel interests and urgency around climate action—may well be something to revitalize and thus reproduce some earlier successes that communicate the Reef beyond a casualty or not of climate crises. Communication networks far beyond, and including Australian mainstream news interests, are certainly capable of such a strategic disruption to the established discourses of mediatized environmental protest.

Note

1 The Climate Council was founded in 2013 by tens of thousands of Australians wanting to create an independent, community-funded organisation following the abolition of the Australian Climate Commission by the federal government. It is led by some of Australia's most esteemed scientists and is oriented towards "climate change communication."

Acknowledgements

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8 Grieving Okjökull

Discourses of the Ok glacier funeral

Catherine J. Bruns

Introduction

In August 2019, a procession of mourners hiked to the top of Iceland's Ok mountain to grieve the loss of a loved one (Press-Republican, 2019). At the summit, funeral-goers gathered around a plaque with the inscription "415 ppm CO_2," a reference to the level of heat-trapping carbon dioxide measured in the atmosphere the previous May (The Citizen, 2019), and said goodbye to a piece of Icelandic identity they never expected would disappear (Kline, 2020): Okjökull, the first Icelandic glacier lost to climate change. Soon after, what began as a small Icelandic event snowballed into a global outpouring of grief as media outlets around the world reported on the "funeral for lost ice" (Borenstein, 2019).

The Okjökull funeral is the latest example of public ecological grief, or "the grief felt in relation to experienced or anticipated ecological losses, including the loss of species, ecosystems and meaningful landscapes due to acute or chronic environmental change" (Cunsolo and Ellis, 2018, p. 275). Mediations of ecological grief enable environmental losses to resonate throughout the public sphere and encourage environmental conversations on a global scale. Yet research on ecological grief remains modest (Cunsolo and Ellis, 2018), even as the formerly unseen yet ongoing climate change casualties of slow violence—or the "violence that occurs gradually and out of sight"—become more immediately visible in the media and everyday life (Nixon, 2011, p. 2). This chapter contributes to this growing area of scholarship by conducting a critical discourse analysis of newspaper coverage of the Okjökull funeral.

This chapter argues that newspaper discourse surrounding the Okjökull funeral amplified an Icelandic public sentiment that characterized Ok glacier as a grievable life. Analysis demonstrates how journalistic coverage of the funeral, intrigued by the newsworthiness of a commemorative service for a deceased glacier, intensified mourning for Okjökull by relaying Icelandic grief to a global audience. This chapter also illustrates how mediations of the funeral functioned both to acknowledge the loss of Okjökull and draw attention to other precarious lives—both human and non-human—disproportionately impacted by the "structural violence" (Galtung, 1969) of climate change.

To support these claims, this chapter analyzes newspaper discourse surrounding the Okjökull funeral through the lens of ecological grief. First, this essay familiarizes readers with the history of Okjökull, the glacier's death, and the memorial that followed. Afterwards, it summarizes scholarly perspectives on mourning, grievability, and ecological grief as a cultural response to environmental loss. The chapter then details the results of a critical discourse analysis of newspaper articles about the Okjökull funeral and reflects on how media representations of ecological grief may bring attention to and make visible an increasingly climate-vulnerable world.

Vanishing ice: The Okjökull funeral

Okjökull was a "once-iconic glacier" located atop Ok volcano in western Iceland (Hansen, n.d.). To be considered living, a glacier must be able to support its own weight and move, visual criteria that are assessed via the presence of crevices and opaque water beneath a glacier's surface (Hu, 2019). In 1901, maps of Okjökull estimated its size as 38 square kilometers, but aerial photographs taken in 1978 showed it as only 3 square kilometers (Hansen, n.d.). Over time, Okjökull continued to decrease in size and thickness, placing it at risk of losing its living status (Hu, 2019).

In 2014, Icelandic glaciologist Dr. Oddur Sigurðsson compared Okjökull's appearance to earlier photos and determined that the glacier "was far too thin to be able to move"; consequently, Okjökull was stripped of its *jökull* designation and declared dead (Hu, 2019). As of 2019, the remains of Okjökull—now relegated to just "Ok" due to its rescinded jökull identity—are estimated to be less than 1 square kilometer (Hansen, n.d.).

The idea for an Okjökull funeral was suggested by Rice University anthropologists Cymene Howe and Dominic Boyer (Hu, 2019). When Okjökull's death was first announced, "There was just one small news piece in English-language news, and no international coverage," expressed Howe, which led the researchers to create a documentary about the surviving mountain, transformed by the loss of the indelible Okjökull, called "Not Ok" (Hu, 2019). While working on the film, Howe and Boyer felt compelled to honor the glacier "that had been destroyed with little fanfare," and after learning there were no monuments to former glaciers anywhere in the world, they agreed that memorializing Okjökull was "an important symbolic and political statement to make about the radically transforming environment around the world" (Hu, 2019).

On Sunday, August 18, 2019, around 100 people gathered at the base of Ok mountain to commemorate Okjökull (Johnson, 2019). The diverse crowd of mourners included researchers like Howe, Boyer, and Sigurðsson; political figures such as Icelandic Prime Minister Katrín Jakobsdóttir, former Icelandic Presidential candidate Andri Snær Magnason, and former President of Ireland and former U.N. High Commissioner for Human Rights Mary Robinson; as well as dozens of activists, farmers, and children (Johnson, 2019). The number of political and media attendees was significant considering Howe and Boyer's goal

of making the funeral a political statement, which many eulogies took to heart: "The climate crisis is already here," lamented Prime Minister Jakobsdóttir, "It is not just this glacier that has disappeared… The time has come not for words, not necessarily for declarations, but for action" (Johnson, 2019).

After the speeches, the procession summited the mountain to install a memorial plaque (Johnson, 2019). Sigurðsson read a death certificate intended to concretize Okjökull's death and reflect the inevitability of its loss: "The age of this glacier was about three hundred years. Its death was caused by excessive summer heat. Nothing was done to save it" (Johnson, 2019). The plaque's message, etched in English and Icelandic, was then revealed:

> Ok is the first Icelandic glacier to lose its status as a glacier. In the next 200 years, all our main glaciers are expected to follow the same path. This monument is to acknowledge that we know what is happening and what needs to be done. Only you know if we did it.
>
> (Blagburn, 2019)

The goal of the Okjökull funeral was to draw attention to an environmental loss that would have gone unnoticed due to the "temporal dispersion of slow violence" (Nixon, 2011, p. 3), or how human and ecological casualties scattered "across time and space" appear insignificant when viewed in isolation (Nixon, 2011, p. 2). Mediations of the funeral combated this issue by comparing the glacier's death to other environmental casualties and highlighting how "calamitous repercussions [play] out across a range of temporal scales" (Nixon, 2011, p. 2). To understand how this media discourse represented the glacier as a globally significant ecological casualty, the following section considers the role of temporality in mourning, grievability, and slow violence.

Mourning bodies, grieving nature

Despite being used interchangeably, the concepts "grief," "mourning," and "bereavement" are actually temporally distinct phases in the process of loss (DeSpelder and Strickland, 1983). Bereavement, or the initial acknowledgment of an unexpected death, gives way to two phenomena that help individuals process the long-term implications of loss: grief, or one's emotional response to loss, and mourning, or how one confronts who they are now and will be in the face of newfound absence (DeSpelder and Strickland, 1983).

Funerals are one such mourning ritual that encourages loss to co-mingle with the future (Derrida, 2001). Funerary speech crafts a new timeline by recognizing a loss, converting relationships with the dead from present to past, easing mourners' fears of mortality, reassuring grievers that the deceased lives on in their thoughts and actions, and re-knitting the community (Jamieson, 1978). In some cases, the eulogy calls for deliberative action to complete tasks the deceased left unfinished or accomplish new initiatives that were meaningful to the departed (Jamieson and Campbell, 1982), which enables mourners to carry

on the deceased's legacy and protect those who could be lost in the future (Barnett, 2019). However, it is within these periods of reflection that the significance of a loss is felt or ignored, and by extension, when the politics of who and what is worthy of remembrance comes into play.

The politics of remembrance is closely connected to body politics, whereby bodies are made political due to the social vulnerability of bodies themselves (Butler, 2004). The existence of a body "implies mortality, vulnerability, [and] agency" because we can see, touch, and command a body to act (Butler, 2004, p. 26). Although we view our bodies as private, bodies exist in the public sphere, which creates conflict as to who controls a body and what bodily actions are permissible (Butler, 2004). During times of loss, "our fears can give rise to the impulse to resolve it [grief] quickly" through acts of exploitative violence intended to help the grieving regain a sense of security (Butler, 2004, p. 29).

Unfortunately, detaching from grief can lead to disassociation with bodily suffering and abandonment of the most vulnerable (Butler, 2004). The unavoidable dangers of physical precariousness are extended through the politics of the public sphere, which overexposes certain bodies to injury or death (Butler, 2009). When one of these "nameless and faceless" bodies dies, the loss fails to register with the public because the death is considered un-markable and unworthy (Butler, 2004, p. 46). The act of determining bodily worth thus qualifies which lives are deemed grievable and worthy of remembrance (Butler, 2004).

Overwhelmingly, ungrievable lives belong to historically marginalized bodies. Giorgio Agamben (1998) takes up the notion of bodily exclusion via "bare life," in which body and voice exist in parallel to political existence and language. To be acknowledged by the Western state as human, one must first distinguish and destroy their non-human animality, thereby privileging their political existence over their own body (Agamben, 1998). Yet attaining political representation does not guarantee that the interests or voices of marginalized bodies will be recognized (Spivak, 1988) or even deemed human (Agamben, 1999). In fact, the dehumanization of bodies encourages acts of atrocity and enables entire populations to go unrecognized and remain ungrieved, from Jewish prisoners in internment camps (Agamben, 1999) to subaltern women during the rule of the British empire (Spivak, 1988) to queer Americans at the peak of the AIDS crisis (Butler, 2004). Because discursive processes of dehumanization continue, discourses that humanize ecological bodies must carefully consider how, when, and why certain bodies are deemed grievable and others are not.

Slow violence against ecological bodies—such as species loss, warming oceans, and deforestation—is difficult to identify not only because it is seemingly invisible, but because of its structural nature: slow violence cannot be traced back to any one individual or direct act of harm, but rather, manifests "as unequal power and consequently as unequal life chances" (Galtung, 1969, p. 171). This power difference is most often represented through uneven distribution of resources (Galtung, 1969), leading to a form of "unseen poverty" that Nixon (2011) defines as "the environmentalism of the poor" (p. 4).

Environmentalism of the poor asserts that those in poverty, particularly in the Global South, are intrinsically motivated to care for the environment because they depend on it as a natural resource (Martinez-Alier, 2002). Comparatively, those in power—often in the neoliberal Global North—extract and exploit the environment in ways that benefit the wealthiest while harming the poorest (Martinez-Alier, 2014), from industrial mining of resources in the Peruvian Andes (Gamu and Dauvergne, 2018) to environmental degradation of the Niger-delta region (Akhakpe, 2012) to ongoing land theft and colonial erasure of the Lakota identity (Brewer and Dennis, 2019). These structural power differences foster a culture of human and ecological disposability that leads poor and precarious bodies, often in the Global South, to become victims of slow violence (Nixon, 2011).

Given these inequities, it is unsurprising that ecological grief for these slow violence casualties would also be felt unequally. Cunsolo and Ellis (2018) note that while ecological grief consistently emerges in climate-related contexts, differences in environmental type, scale, and meaning can influence one's connection to a natural loss and the ecological grief that results. For example, whereas the post-disaster landscape of a hurricane may incite grief for a newly lost home (Morrice, 2013), grief responses to slow moving environmental destruction such as ice loss may amplify or resurface past trauma and present as elevated stress, increased violence, or substance abuse (Willox et al., 2013).

Similarly, ecological grief can be impacted by "what we choose to call a particular place, being, or phenomenon" (Barnett, 2019, p. 290). Barnett (2019) notes that place-names are important in many Indigenous cultures, and that proper names, such as species names, "generate a point of connection, a personality of sorts, an individual, in whom we can identify, empathize, and for whom we can grieve" (p. 293). Neglecting to name non-human nature indicates our disconnect to those with whom we share an ecological home and our unwillingness to deem the other grievable (Barnett, 2019), which allows precarious ecological bodies to go unmarked by the media.

Despite journalism's aptitude for creating a space for publics to grieve (Harrington-Lueker, 2008), media coverage is constrained by demands for newsworthiness. Industry downturn in the U.S. in the early 2000s hit environmental journalism especially hard: freelance reporting increased, expert reporters and editors decreased, and recurring environmental sections in media nearly evaporated (Neuzil, 2020). These changes also enabled the growth of polarization and disinformation in climate change reporting, which now leaves the public "with only the conflicting statements of the private and public interests" (Sachsman and Valenti, 2020, p. 2).

Consequently, media companies have sought new ways to "push their versions of reality to the top of results" using search engine optimization (Gillam, 2020, p. 84) and "as if" images that craft "a connection between an image, its corresponding news event, and distant circumstances that might be tangentially connected or broader than what is depicted" (Zelizer, 2010, p. 313). In reviewing Kitch and Hume's book *Journalism in a Culture of Grief* (2008), Harrington-

Lueker (2008, p. 696) adds that this transformation has drastically impacted coverage of lost lives, as "a quick tallying up of how many people are affected by an event, and how severely, helps editors gauge whether a story appears on the front page, top-of-the-fold, or is buried on page 27." But for casualties of climate change, such attention-seeking strategies have risks: will an audience's horror or fascination for slow violence translate into action or rejection?

The challenges facing human and non-human bodies demand that we better account for the temporal dispersion of slow violence and evaluate new means of translating slow moving disasters into "stories dramatic enough to rouse public sentiment and warrant political intervention" (Nixon, 2011, p. 3). The Okjökull funeral represents one such attempt to shed light on a body that suffered from the attritional blows of slow violence. Examining media discourses of the funeral is one way to assess the resonance of this loss across multiple contexts. The following section applies the critical concepts of mourning, grievability, and ecological grief summarized above to conduct a critical discourse analysis of newspaper coverage of the Okjökull funeral.

Methodology

For this analysis, discourse was limited to newspaper content collected via Newsbank: Access World News. A search of the phrase "Okjökull glacier" was conducted in All Text in order to capture articles about both Okjökull and Ok glacier. Narrowing the source type to newspaper only with no constraints on date yielded 154 results.

After initial data collection, criteria were established to evaluate data suitability. A core requirement was mention of Okjökull and its funeral; articles that mentioned Okjökull without referencing the funeral were excluded. Articles that referenced Okjökull as a generalized example of climate change or an attention getter for a non-environmental subject (e.g. sports) were excluded, but articles that focused on glacier loss *and* mentioned Okjökull were included. If an article was picked up by multiple news outlets, the earliest published version was included and all other duplicates were removed. Additional exclusions included: (1) news briefings; (2) reader letters, commentaries, or editorials written by non-news staff; and (3) one non-English article, which was excluded due to its outlier status. The data remaining included 37 newspaper articles published between July 2019 and March 2020. Articles spanned 12 countries and included both local and national media coverage from outlets such as *The Daily Telegraph* in London, *The National* in Abu Dhabi, and *The Dominion Post* in Wellington, New Zealand.

A critical discourse analysis of newspaper discourse associated with the Okjökull funeral was conducted. First, all articles were read for coherency and understanding. Second, articles were read inductively with specific attention being paid to notions of ecological grief, such as mourning, precarity, and grievability. During the third reading, key phrases and sentences were highlighted, such as references to the glacier's name and history, descriptions of funeral

rituals, and reflections on changing culture and identity. The results were induc-
tively categorized based on theme and overlapping subject, and articles were
read one final time to hone categorical boundaries. The following section sum-
marizes findings from analysis.

Analysis

Remembering Ok's past: characterizing the life of Okjökull

Mediations of the funeral situated Okjökull as a precarious life and the cor-
responding funeral as evidence that publics can and do grieve ecological
losses. Specifically, newspaper articles emphasized how climate change has
endangered glacial stability and how Okjökull's passing has impacted Icelan-
dic identity. In doing so, discourse reflected an Icelandic perspective that
regarded Ok glacier as a grievable life and relayed the Icelandic experience of
ecological grief to global audiences.

Coverage of the Okjökull funeral alluded to the inherent precarity of glacial
existence and how this precarity makes glaciers susceptible to losing their living
status. The vulnerability of a living block of ice is "already baked into the climate
cake," explained Carlson and Hartz (2019), which readers could see by conduct-
ing an at-home science experiment: "Grab an ice cube out of your freezer and put
it on the counter. That ice cube is now unsustainable in your kitchen's climate" in
the same way that a glacier is unsustainable in the sun. Although the speed of ice
melt can be controlled "depending on how warm you keep your kitchen" (Carl-
son and Hartz, 2019), Okjökull experienced a period of rapid global warming
that exacerbated its existing ecological precarity and led to its demise.

Mentions of climate change generally were then related to Okjökull through
commentary on glacier criteria (e.g. The Calgary Sun, 2019). "To have the status
of a glacier," explained a *China Daily* (2019) article, "the mass of ice and snow
must be thick enough to move by its own weight." By failing to move and
shrinking in size, Okjökull was able to be "stripped" of its living status (e.g. The
National, 2019) and redefined as "dead ice" (Trevizo, 2019). These references to
glacial standards of life characterized Ok glacier as having succumbed to the
effects of slow violence and reminded global audiences of the inherent precarity
of glaciers.

When Okjökull fell victim to its vulnerability, newspaper articles stressed that
the Icelandic public perceived the glacier's loss as grievable. For example, to
Icelanders, Ok glacier was not just a pile of ice and snow but a named being: "Its
name was Okjökull, or 'Ok' glacier for short" (Press-Republican, 2019). Dis-
course surrounding the funeral also noted that the non-human glacier was born
in Iceland—even if its exact birth date was unknown (The Durango Herald,
2019)—and lived a full life before passing away at the approximate age of 700 (e.
g. Blagburn, 2019). Yet most importantly, discourse expressed that the loss of Ok
glacier was acutely felt by the people of Iceland, who considered Okjökull "a
loved one" (Press-Republican, 2019).

Journalists communicated that the death of Okjökull plunged the country into mourning (e.g. Blagburn, 2019) for a life that was distinctly intertwined in Icelandic identity. Not only was the loss of Ok glacier unanticipated, but discourse claimed that it was also deeply personal and culturally jarring to Icelanders because "The glaciers of Iceland seemed eternal" (Kline, 2020). Journalist Justin Thomas (2019) explained that before Okjökull's death, most Icelanders could never have imagined "how it would feel to witness the final demise of a glacier." Thus, while the loss of Okjökull incited feelings of grief usually reserved for humans, mediations captured how its cultural resonance surpassed the constraints of its ecological body by forcing Icelanders to reconsider their own "sense of place and identity at a very fundamental level" (Thomas, 2019).

Overall, mediations explored the threat of climate change to non-human bodies and the cultural relationship that publics can have to ecological lives. Although these journalistic musings were initiated by the Okjökull funeral and the Icelandic public's expressions of ecological grief, their publication in international news outlets enabled the death of Okjökull to transcend time and place and reach a wider global audience.

Community connection: processing the loss of Okjökull

Discourse also linked the memorial to human rituals of mourning, which Icelandic publics used to process their grief. News coverage of the funeral enabled this ecological grief to reach global publics, calling them in to a community of grief unconstrained by borders or temporality. However, journalists also honed in on the glacier's cause of death, a rhetorical strategy that encouraged closure with the past without forgetting the violence of the present. These mediations are abnormalities for an industry that has historically enacted a gatekeeping role (Vos and Finneman, 2017) and often sidelined the environment for more newsworthy subjects.

At its core, discourse established the Okjökull funeral as a mourning ritual for the people of Iceland (e.g. Indian Express, 2019b). Multiple articles quoted Rice University anthropologist Cymene Howe as saying, "Memorials everywhere stand for either human accomplishments…or the losses and deaths we recognise as important" (e.g. The National, 2019); the arrangement of a funeral thus demonstrated how Okjökull was important to the Icelandic public, despite its non-human status. Mediations described the event as a vital opportunity for Icelanders to honor the deceased (e.g. Skirka, 2019), say goodbye (e.g. Indian Express, 2019a), and reminisce about the past (Borenstein, 2019), all stages of grief for humans that were instead applied to the non-human glacier. Articles also mentioned that the funeral organizers "hoped the commemoration would provoke feelings through the powerful use of symbols and ceremony" (Indian Express, 2019b), another reference to reactions characteristically reserved for human lives.

Representations of the funeral also emphasized the significance of the memorial plaque. Whereas the funeral—which included poetry readings, speeches, and moments of silence (Daily Breeze, 2019)—was a ritual for the mourners, the

plaque was a monument to the glacier (Rice, 2019), akin to installing a tombstone. Erecting an eternal marker to memorialize (Love, 2019) and commemorate (Healey, 2019) Okjökull ensured that the deceased would be remembered even after the cameras disappeared. These discursive connections to human mourning rituals captured Icelandic belief that the non-human Okjökull was just as grievable as humans and that its newfound absence would be influential in shaping public memory.

Of particular import is that mediations of the funeral allowed those not in attendance to understand the gravity of a climate change casualty, despite not witnessing it first-hand. In an interview, Howe explained that unlike statistics and models that can make climate change feel "abstract" or "incomprehensible," the Okjökull memorial "is a better way to fully grasp what we now face" (The National, 2019). Had a funeral not been held, media outlets may have ignored the glacier's passing and limited knowledge of Ok glacier outside of Iceland. However, the newsworthiness of the funeral event piqued the interest of journalists, and the resulting coverage made global publics aware of a significant ecological loss.

Mentions of the glacier's cause of death were also rampant. Nearly every article identified Okjökull as the first Icelandic glacier lost to climate change (e.g. Blagburn, 2019), a label that attributed the glacier's death to acts of structural violence (Galtung, 1969) and admitted that the glacier may not be the last climate casualty. Many news stories coupled this description with portions of the plaque statement—most notably "This monument is to acknowledge that we know what is happening and what needs to be done. Only you know if we did it" (e.g. The Durango Herald, 2019)—to allude to humanity's role in ongoing climate change violence. In both instances, discourse suggested that global readers played a part in the death of Okjökull due to their contributions to global warming.

However, the clearest ascription of human blame was made by Howe, who explained that the purpose of the funeral was to show "that this [the death of Okjökull] is something that humans have 'accomplished,' although it is not something we should be proud of" (Indian Express, 2019b). Howe's candid statement connected the dots of more subtle references to express that publics should feel ashamed for their complicity in climate change. Coupled with the exemplars mentioned earlier, media discourse strongly implicated humans in the death of Okjökull, both as perpetuators of and bystanders to ongoing acts of slow violence.

"A message to the future": protecting precarious lives

On the surface, the Okjökull funeral was a way for publics to reflect on the past and come to terms with a new future. Yet media discourse also captured a more chilling purpose for the event: to warn of losses still to come. Across the board, journalists stressed that the death of Ok glacier would be followed by many other casualties, not all of which would be ecological. Okjökull's

legacy, immortalized through mediations, thus reminded global audiences that "Memorials are not for the dead; they are for the living" (Rice, 2019) and that there are plenty more precarious bodies to be saved.

Although images were not included in the analysis, the value of recognizing ecological loss with a visual funeral was noted in the text of multiple articles. Specifically, discourse described the Ok funeral as a made-for-media event (e.g. Borenstein, 2019) that enabled global audiences to bear witness to a climate casualty from afar. Textual representations also expressed hope that the event's physical representation of a slow violence outcome might help global publics understand the implications of passing time and the need to pull an emergency brake (Rozell, 2019) to slow the world's approach to an environmental tipping point (The Edmonton Sun, 2019).

In addition to underscoring the benefits of presenting a visual funeral, media texts commented on the fact that the event brought attention to the precarity of other vulnerable lives. "By memorialising a fallen glacier, we want to emphasise what is being lost—or is dying—the world over," explained Howe (Blagburn, 2019), including the extinctions of other glaciers (China Daily, 2019), non-human bodies (Carlson and Hartz, 2019), and human lives (Cyprus Mail, 2019). Discourse also explained how environmental losses damage local and regional infrastructures (Carlson and Hartz, 2019) and wreak havoc on locations that depend on tourism of natural sites (Kline, 2020), thus expanding the idea of precarity to greater society.

As difficult as it is to accept the loss of flora, fauna, and economic livelihood, newspaper coverage stressed that what is most at risk is also the most difficult to envision: identity. In his article for the *Reading Eagle*, Dave Kline (2020) lamented the cultural effects of ecological loss in the U.S., writing "Imagine the impact losing an iconic landmark would have here at home… Preserving traditions, folklore and entire ways of life are supported by people living in such and [sic] region and by people visiting such a region." Similarly, Iceland's Prime Minister bemoaned how "In just a few decades, Iceland may no longer be characterised by the iconic Snaefellsjokull, famously known as the entrance to Earth in Jules Verne's *Journey to the Center of the Earth* … In short: the ice is leaving Iceland" (The National, 2019). In both cases, the Ok funeral reminded Icelandic and global publics how individual and national identities are intertwined with the environment and how much of the future rests on protecting precarious non-human lives.

In its entirety, media discourses positioned Ok glacier as a martyr whose death could be the catalyst to unify publics and defeat climate change. Nearly every article described glaciers' futures as bleak, with Iceland alone expecting its glaciers to have entirely disappeared in the next 200 years (Sorooshian, 2019). But as evidenced by the commanding tone of many journalists (e.g. Rice, 2019), facing a bleak future is not the same as assuming it: "This is the story of our generation," professed glaciologist Guðfinna Aðalgeirsdóttir to columnist Ned Rozell (2019), "Do we do something? Can we do something?" Although the death of Okjökull warned of what is at stake (The Dominion Post, 2019), it did

not remove the opportunity to change course. Howe expressed hope that the funeral would demonstrate "that it is up to us, the living, to collectively respond to the rapid loss of glaciers and the ongoing impacts of climate change" (Cyprus Mail, 2019). Ultimately, coverage of the Okjökull funeral gave global audiences two options: accept the future or change it.

Discussion

The Okjökull funeral is a rare example of slow violence that successfully penetrated the public sphere. Its moment in the media spotlight enabled the glacier's story to resonate with readers around the world, but news coverage of the event reveals far more about humanity than just our thoughts on global warming.

Mediations of the Okjökull funeral showed how Icelandic mourners applied human rituals to a non-human body, thus characterizing the glacier as a grievable life. Discourse of the event revealed Icelandic efforts to memorialize Okjökull and reknit the Icelandic community just as a human eulogy would (Jamieson, 1978), thereby positioning the glacier as worthy of mourning. Additionally, media emphasis on the glacier's cause of death represented a eulogistic call for deliberative action (Jamieson and Campbell, 1982) from global publics that demonstrated decisiveness regarding how Okjökull would have wanted to be remembered. The funeral's advocacy component thus honored Okjökull by seeking to make it the first and last glacier lost to climate change.

Additionally, newspaper coverage revealed that the temporal aspect of humans' grief for humans also appears in humans' grief for ecology. Human eulogies help mourners acknowledge death and transform relationships with the deceased from existing in the present to having existed in the past (Jamieson, 1978), thus highlighting the impact of the deceased across all three phases of time. Similarly, mediations of the Okjökull funeral reflected on and represented the glacier's life and death temporally, from its past existence as an active sheet of ice to the impact its absence now impinges upon the present to the warning its death communicates to the future. Expressing Okjökull's life and death through time reminds Icelandic and global publics that climate change casualties exist in a temporal world: even if it happens over a long duration, slow violence is still *happening*, whether we see it or not.

Although memorializing a glacier in similar ways as a human suggests progress in Western approaches to and relationships with nature, journalistic interest in Okjökull also highlights flaws in dominant Western approaches to grievability. Scholars such as Agamben (1998, 1999), Spivak (1988), and Butler (2004, 2009) have stressed that silenced, marginalized, or otherwise precarious bodies are the first lives to be deemed ungrievable and the last deaths to be acknowledged in the public sphere. Media interest in the death of Okjökull therefore exposes that not only are humans capable of perceiving ecological bodies as grievable, but that some humans perceive ecological bodies as *more grievable* than human bodies. Ok glacier's success in being recognized as a grievable life thus begs the question: why are we mourning ecological lives when human lives are ignored every day?

This continued neglect of marginalized human bodies is further exacerbated when viewed through a lens of Indigeneity. Indigenous peoples comprise roughly 5 percent of the world's population—an estimated 370 million people—and manage or occupy an estimated 20–25 percent of the Earth's land area (Garnett et al., 2018), even while officially governing less than 5 percent of protected areas worldwide (Tauli-Corpuz, 2016). Of this land area, an estimated 40 percent intersects with diverse environmental landscapes (Garnett et al., 2018) that hold 80 percent of the planet's biodiversity (Sobrevila, 2008). Yet despite carrying this knowledge and serving as environmental stewards for a majority of the planet, "the important role played by indigenous peoples as environmental guardians has still failed to gain due recognition" (Tauli-Corpuz, 2016, p. 7).

The omission of Indigeneity in the Okjökull funeral follows a longstanding history in which Indigenous contributions, caretaking, and relationships with the ecological world are overshadowed by the minimal protective efforts of white settler and political actors. The lack of acknowledgment of Indigenous practices, both in the global media and by Icelandic funeral attendees, also perpetuates a narrative in which Indigenous relationships with nature are perceived as inferior or less than those relationships curated by colonists. The Okjökull funeral was a powerful public acknowledgment of an environmental loss, but it failed to recognize and include Indigenous people and the unresolved violence of settler colonialism.

Despite these flaws in execution, the Ok glacier funeral accomplished its objective of breaking through journalistic noise and bringing attention to a climate casualty. In this regard, the Okjökull funeral signifies the value of dedicating more time and resources to quality environmental journalism, especially considering its decrease in recent decades (Neuzil, 2020). Discourse mentioned the benefit of publicly representing the loss of Ok glacier (e.g. Borenstein, 2019) because it helped audiences understand the passage of time and a rapidly approaching point of no return (The Edmonton Sun, 2019). Okjökull was represented through public organizing, but one of the most efficient ways to record and disseminate information throughout the public sphere is via media.

Global response to Ok glacier demonstrates that audiences emotionally connect with the natural world, and journalism is a vital tool for pairing visuals with narrative accounts of slow violence, such as coral bleaching or deforestation; indeed, using images to visualize news events can incite meaning making and social action as well as, if not better than, text-only journalism (Zelizer, 2010). Although environmental news coverage may be limited, journalism can choose to change—or, depending on the state of the world, change may be forced upon it. More importantly, journalists have the ability to share precarious environmental lives with the world *before* they become climate casualties, giving the public time to act instead of mourning after the fact. If we're lucky, perhaps one day news coverage of nature will be more than just the ecological branch of "If it bleeds, it leads."

Conclusion

As environmental journalists grapple with downsizing, digitalization, and advertising demands, the stakes of their work have continued to rise: "If, before, journalists covering the environment needed to understand environmental history, big data, systems, and trends, now they also need to understand how environmental issues threaten global stability, security, and massive social, political, economic, and military movements" (Motta, 2020, p. 114). The environment is running out of time—but so are those bodies who live in it. Denying, ignoring, or erasing slow violence is no longer an option, and journalism—unbounded by time or place—is one of the most efficient ways for the public sphere to learn of and respond to environmental destruction.

In a time when ecological casualties often go unmarked and unreported, public recognition of Okjökull as a grievable life is a battle won in the war against climate change. Humans mourn humans, in part, because of the innate and unbreakable relationship we share in *being* human. Ok glacier was not human—and yet the world mourned its loss. However imperfect and exclusionary the Okjökull funeral may have been, its existence is a powerful reminder of humanity's ability to connect with and grieve ecological bodies.

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9 Negotiating conflicting temporalities in Canadian Arctic travel journalism

Matthew Tegelberg

Introduction

Writing for *The Cruisington Times*, [1] Wallace Immen (2020) entices prospective tourists to sign up for the "unique" opportunity to partake in a "life-altering experience" on an Arctic voyage. His short article describes the 2021 itinerary for a 63-day "Grand Voyage Arctic cruise" that follows in the wake of celebrated European explorers. The voyage includes a trip through "the fabled Northwest Passage [where] guests will have cultural experiences in remote settlements" while enjoying "butler service and gourmet meals accompanied by premium wines and spirits, specialty coffees, bottled water, juices and soft drinks." With all-inclusive fares beginning at US$71,100 per person, an affluent class of luxury tourists are the target audience of this promotional narrative. Immen's story ignores rapidly changing environmental conditions that have made luxury cruises more commonplace in the Arctic. It also neglects to account for the ways in which climate change is transforming the lives of the Arctic communities who live in the wake of these luxury cruise liners.

Unlike Immen, in a report for *Nunatsiaq News*, [2] Elaine Anselmi (2019) outlines several critical socioecological concerns stemming from rapid growth in the number of vessels passing through Arctic waters. She writes, for example, of black carbon emissions, that spew from expeditionary vessels, as "a particular concern in the Arctic because, after being emitted, these particles settle on the white polar snow and ice, darkening its surface to absorb more sunlight and speed up the melt." Anselmi adds that, while the heavy fuel oils (HFO) that power cruise ships are banned in Antarctic waters, replacing the dirty fuel with a sustainable alternative has been delayed in remote Arctic communities due to "concerns about increasing the already-high cost of living." In this local journalism, social and ecological concerns are interwoven offering a far more critical, nuanced, and relational view of the luxury Arctic cruise.

Time manifests differently in each of these journalistic narratives of Arctic travel. For Immen, the linear temporality of the tourist itinerary drives a promotional narrative that encourages luxury consumption while disregarding the socioecological costs. While European travel and exploration narratives are celebrated, local realities are reduced to a sequence of "cultural experiences in

remote settlements" that are represented as "unique" stops on a luxury tourist's itinerary. This confinement of time to the bounds of a tourist itinerary aligns with the wider tendency for Euro-American travel writing to reproduce dominant colonial discourses and stereotypes.[3] Critical scholarship on historical and contemporary travel writing reveals how such narratives consistently function "as an imperialist discourse through which dominant cultures (white, male, Euro-American, middle-class) seek to ingratiate themselves" (Holland and Huggan, 1999, p.viii) while erasing the histories and lived experiences of Indigenous locals (Pratt, 2007). By prioritizing *tourist time*, Immen's readers are similarly disconnected from both the enduring legacies of colonialism, and the rapidly changing environmental conditions that are shaping lived realities of Arctic tourism. In Anselmi's local reporting, by contrast, time extends beyond the tourist itinerary to encompass a confluence of relational factors, weaving together past, present and future to account for local responses to luxury cruise tourism on the ground. This includes a strong presence of local voices, representing those working to regulate and limit the harms caused by the tourist practices Immen eagerly promotes. This "view from somewhere" (Callison and Young, 2020, p.16) is exemplary of the potential local journalists hold to sharpen systems-oriented approaches (ibid., p.212) that can contest and negotiate tourist time that dominates commercial travel journalism.

This chapter examines the representation of Canadian Arctic tourism in three distinct forms of journalistic writings on travel. The study is attentive to the role that climate change and time play in such coverage. After introducing the concepts of "Last Chance Tourism" and "disaster capitalism," they are related to the practices of Arctic travel journalists. Next, qualitative analysis places commercial travel journalism into dialogue with reporting by local journalists and arrives at two main findings. First, that climate change was underrepresented across the sample. Second, that two distinct conceptions of time—aligned with unique settings and contexts for journalistic production—characterized the examined coverage. The chapter concludes with a brief discussion of how these findings point to both the shortcomings of Canadian Arctic travel journalism and to the potential for its reform through the adoption of a systems journalism approach (Callison and Young, 2020).

Last Chance Tourism, disaster capitalism, and the "vanishing" Arctic

Over the past decade, tourism scholars have sought to conceptualize and better understand a burgeoning phenomenon known as "Last Chance Tourism" (Dawson et al., 2010; Lemelin et al., 2010; Dawson et al., 2011; Lemelin and Whipp, 2019). Last Chance Tourism (LCT) refers to the growing popularity of tourist practices that are motivated by the desire to visit threatened and endangered attractions before they disappear. It is a unique confluence of vulnerability, scarcity and demand that attracts tourists to these last chance destinations (Dawson et al., 2011, p.252). As global warming places more iconic World Heritage sites at risk (Markham et al., 2016, pp.11–12), tourists have been

simultaneously racing to visit these vulnerable destinations (Dawson et al., 2011). Thus, in popular travel media, expressions of temporal urgency are central to the marketing of LCT attractions (Lemelin et al., 2010; Dawson et al., 2011).

With Arctic warming occurring faster than the rest of the planet (Labe, 2020), LCT researchers have focused on a correlated tourism boom across this vast region (Dawson et al., 2011; Bjørst and Ren, 2015; Palma et al., 2019). For example, climate change is the main driver of local tourism at Ilulissat Icefjord (Markham et al., 2016, p.72; Bjørst and Ren, 2015), a UNESCO World Heritage site located 400 kilometers north of the Arctic circle in Western Greenland. Paradoxically, the representation of Ilulissat Icefjord as a powerful climate change symbol has served to attract growing numbers of long-haul tourists to this remote Arctic destination (Bjørst and Ren, 2015, p.92). These "climate tourists" (ibid., p.96) come to bear witness to a "…large calving glacier or melting icebergs before it's too late" (Markham et al., 2016, p.73). Similarly, Visit Greenland (2020) dubs Ilulissat Icefjord "Climate Change 'Ground Zero'" where tourists have "a unique opportunity to be active in the climate change conversation … and to let your experiences in Greenland inspire your life back home." The rationale for promoting such carbon-intensive tourism is that, by witnessing climate change first-hand, tourists will become "ambassadors" (Dawson et al., 2011, p.259), spreading awareness of the issue in their everyday lives. However, existing research on LCT suggests that such outcomes are uncommon, pointing instead to a concerning "absence of any discussion relating to sustainability, carbon footprint, or socioecological justice in last-chance tourism" (Lemelin et al., 2010, p.488). Given these ethical concerns, this chapter focuses on depictions of tourism in the Canadian Arctic, where iconic images of vanishing icescapes and endangered species are attracting growing numbers of tourists (Maher, 2016, p.215).

The high costs associated with Arctic travel makes visiting its vanishing attractions a form of luxury tourism that is primarily accessible to a highly affluent class of tourists.[4] Hence, the marketing of Arctic attractions threatened by climate change resonates with the impetus of "disaster capitalists" who have viewed and exploited ecological devastation and loss as "exciting market opportunities" (Klein, 2007, p.6). Bonilla and Lebrón (2019) document the pernicious marketing of Hurricane Maria that took place in the wake of its devastation. For one, they describe how an elite class of Silicon Valley cryptocurrency billionaires came to view Puerto Rico as a "corporate Club Med" where they could exploit exceptionally low levels of taxation to pursue hyper-individualistic visions of sovereignty (Bonilla and Lebrón, 2019, n.p.). Second, they expose fissures in state and media responses that constructed "a linear timeline of disaster and recovery" (ibid., n.p) which drew attention away from ongoing historical processes (colonialism, state failure, capitalization) that greatly exacerbated the hurricane's devastating impacts. Finally, the authors amplify the voices of local actors whose grassroots efforts took the post-disaster recovery into their own hands after the government failed them (ibid., n.p.). Albeit contextually distinct, parallels can be drawn

between visions of post-disaster Puerto Rico as a corporate paradise and the capitalist class of luxury tourists who are racing to consume endangered Arctic attractions. To illuminate these parallels, this chapter interrogates how Canadian journalists have depicted "vanishing" Arctic attractions and the extent to which these narratives play into the hands of disaster capitalists by prioritizing the commercial interests of luxury tourists while concealing the harmful impacts and local concerns associated with such practices.

Travel journalism, climate change, and Canadian Arctic tourism

Travel journalism, in its many contemporary forms, maintains a central role "in ascribing meaning to tourism and producing tourist destinations" (Hanusch and Fürsich, 2014, p.2). To contribute to a growing body of literature on travel journalism (Hanusch and Fürsich, 2014; Pirolli, 2018), this chapter critically examines how Canadian travel journalists have narrated the relationship between climate change and Arctic tourism. Following Hanusch and Fürsich (2014, p.11), travel journalism is broadly defined here as encompassing

> factual accounts that address audiences as consumers of travel or tourism experiences, by providing information and entertainment, but also critical perspectives. Travel journalism operates within the broader ethical framework of professional journalism, but with specific constraints brought on by the economic environment of its production.[5]

The capacity for travel journalists to abide by ethical standards and serve up critical perspectives has been eroded by the rise of digital media (Pirolli, 2018). In the digital age, legacy news outlets compete for an increasingly fragmented audience share with user-generated content produced by non-traditional actors, including travel bloggers, review websites and social media influencers. Consequently, travel journalism researchers have pointed to a host of ethical conflicts arising from these new pressures and constraints (Hanusch and Fursich, 2014). In light of these concerns, the analysis in this chapter extends to coverage of Arctic tourism in local news media, due to the potential for critical perspectives to emerge in the work of local journalists with closer ties to community and place (Hess and Waller, 2017).

Lyn McGaurr (2014) points to climate change as one poignant example of how ethical conflicts can emerge for travel journalists. In a study of how travel journalists covered Tasmania, McGaurr (2014, p.245) found there was "a general neglect of the issue of greenhouse gas emissions from long-haul travel."[6] In a subsequent analysis of online "Last Chance travel lists", McGaurr and Lester (2018, p.127) found urgency was emphasized to heighten the sense that tourists must hurry to visit these destinations before time runs out. Absent from these narratives, once again, were critical interrogations of the contributions these long-haul vacations made to climate change. Also absent were the ways such carbon-intensive travel is exacerbating the ecological harms and losses that these

tourists desire to consume (ibid., pp.130–133). When climate change was mentioned, it was typically represented as a problem for tourism whereas tourism was never positioned as a problem for the climate (ibid., p.129). Building on these findings, this chapter concentrates on how climate change and time informed the ways in which Canadian travel journalists, working in three distinct contexts, covered Arctic tourism.

In Canadian news media, journalists started connecting tourism and climate change in the late 1980s. This early news coverage concentrated on the potential for global warming to disrupt international tourism. One such story for the *Toronto Star* (Temple, 1988) led with the headline: "Greenhouse effect may kill ski industry, Ontario told." By the early 1990s, Canadian journalists cited the projections of climate scientists to raise alarm about the risks global warming would pose for iconic natural attractions, including the Amazon rainforest, coral reefs, glaciers, and island ecosystems. By the early 21st century, polar bears and vanishing polar icescapes had risen to the status of global climate icons while the broad-ranging impacts of Arctic climate change went underrepresented in Canadian news media (DiFranceso and Young, 2010; Callison and Tindale, 2017). During the same period, tourism scholars documented a steady rise in the popularity of Canadian Arctic tourism that has centered around long-haul trips to view two iconic harbingers of climate change: polar bears and vanishing icescapes (Lemelin, 2006; Lasserre and Têtu, 2015). Consequently, this research considers what role climate change has played when Canadian travel journalists have turned attention to burgeoning Arctic tourism.

Research design

The rest of this chapter examines the representation of climate change and time in three distinct forms of Arctic travel journalism. The search terms "Arctic tourism" and "Canada" were used to maintain consistency across a sample of materials collected from several different news sources. The sample timeline is limited to Canadian journalism published between October 8, 2018 and February 28, 2020. This timeline coincides with the publication of the Intergovernmental Panel on Climate Change's (IPCC) Special Report on Global Warming of 1.5°C (SR15) on October 8, 2018. In the wake of SR15, researchers have noted a shift in the language that scientists (Ripple et al., 2020) and journalists (Anand, 2019) employ to communicate about climate change. For example, during this period several major news outlets have adopted new style guidelines authorizing the use of language that evokes a greater sense of urgency to describe climate change (e.g. "climate emergency," "global heating," and "climate crisis").[7]

After conducting the keyword search, results were limited to travel-related news items with a clear topical focus on Arctic tourism in Canada. This produced a sample of 64 relevant items, which were subsequently grouped by source (see Table 9.1). The first group features 21 news items produced by Canadian journalists for legacy and online news outlets.[8] The items were gathered using the keyword search function on *MuckRack.com*. [9] A second group of items was selected from

Table 9.1 Mentions of climate change in Arctic travel journalism

Source	# of items	Mentions of climate change
Legacy news and travel media	**21**	**9 (42%)**
Reporting	16	4
Op-eds	5	5
Travel blogs (6)	**14**	**0**
Local journalism	**29**	**6 (20%)**
Nunatsiaq News	10	3
Nunavut News	11	2
Eye on the Arctic	8	1
Total	**64**	**15 (23%)**

Canadian travel blogs featured on the *Travel Blog Exchange* (TBEX)[10] or included in a popular list of Canadian's most influential travel bloggers.[11] While both sources linked to hundreds of active Canadian travel blogs, a keyword search yielded only six travel blogs and 14 blog posts that focused on tourism in Canada's subarctic[12] and Arctic regions.[13] The third group consists of 29 tourism-related items published in local news media. This material was gathered by conducting keyword searches on two websites that publish and aggregate Arctic news content: *Northern News Services*[14] and *Eye on the Arctic*.[15] After organizing this material, qualitative analysis was guided by the following research questions:

- To what extent is climate change represented in travel journalism on Canadian Arctic tourism?
- What are the salient attractions and themes in this coverage?
- What role does time play in these journalistic narratives?

The underrepresentation of climate change

Given the rapid rate of Arctic warming and its devastating local impacts, it was surprising to find only a small number of items (23 percent) that made direct references to climate change. Table 9.1 cross-tabulates the volume of coverage with the number of items that overtly mention "climate change." This underrepresentation was most apparent in travel blogs where not a single item (14) referred to climate change. In a blog post describing an *Adventure Canada* expeditionary cruise, Solo Traveler author Janice Waugh (2019) echoed the operator's mandate by expressing that: "traveling there is worth the impact on the Arctic as tourists gain and share an understanding of the north and its people." Here, the harmful impacts of long-haul Arctic travel are compensated for by the education that luxury tourists will receive on such a voyage. Other bloggers touched on climate impacts, without naming them as such, in seeking to profile the alluring features of a luxury Arctic voyage.

Reflecting on the unpredictability of sea ice conditions and Arctic wildlife, several cruising bloggers emphasized that "this wasn't a standard 'cruise,' nor was it a 'standard' destination" (Bailey, 2019). Other bloggers detailed encounters with polar bears, beluga whales and other Arctic wildlife while ignoring the impacts climate change is having on these animals and their habitats.

When climate change received attention, it was mostly in opinionated items and local reporting where it was presented as one of the causal factors driving a booming Arctic tourism sector (see Table 9.1). In much of this reporting, climate change was uncritically praised as a positive force for Arctic tourism development and growth. In mainstream Canadian news media, opinionated items for *Edmonton Journal, National Post*, and *Globe and Mail* each identified climate change as the catalyst for an intensification of economic activity in Canada's far north, including the expansion of Arctic adventure and marine tourism. The headline for a *National Post* op-ed, written by columnist Gabriel Friedman (2018), read: "Climate change offers 'invitation to explore the Arctic'"; while another staff columnist linked changing sea ice conditions to an increase in "Northern Exposure" to tourism (Powell, 2018). Only one opinionated item and four local reports looked beyond economic growth to consider the environmental and social costs of a rapidly warming Arctic. Summing up these broader concerns in an op-ed, Canadian environmentalist Ed Struzik (2019) described a voyage through the Northwest Passage as an "unsettling reminder that the region has gone well beyond a climate change tipping point."

Similarly, local reporters offered more nuanced takes on the relationship between climate change and Arctic tourism. A recurring theme in three reports was to weigh "some of the pros and cons of having cruise ships come to town" (Kyle, 2019). These stories conveyed a sense of ambivalence toward luxury cruises within Arctic communities, where locals understand that the economic gains from such commercial tourist activity come with a host of environmental and social concerns. Among them the issue of the black carbon emissions spewed by cruise ships which are known to escalate Arctic warming (Anselmi, 2019). Albeit more attentive to climatic concerns and environment costs, Table 9.1 shows that explicit references to climate change remained rare in local journalism. This under-representation of climate change across the sample resonates with the findings of past research. Namely, that travel journalists have avoided climate change, among other environmental problems, when it conflicts with the commercial tourist activities depicted in their coverage (McGaurr, 2014; McGaurr and Lester, 2018). Although references to time were rare in coverage of climate change, the analysis of salient attractions and themes shows how two conflicting temporal narratives informed how journalists, working in distinct settings, reported on Arctic tourism.

The conflicting temporalities of Arctic travel journalism

Comparative analysis of the three forms of Arctic travel journalism featured in this sample revealed two conflicting conceptions of time. In legacy and online travel media, *tourist time* is prioritized in journalistic narratives that

concentrated on describing "bucket-list attractions" while positioning Arctic tourism as a staple of economic growth. Tourist time thereby refers to a set of linear, consumer-oriented depictions of the Arctic structured around the fleeting needs, interests, and expectations of tourists. By contrast, when local journalists reported on Arctic tourism, they consistently did so by linking contemporaneous trends to a host of wider social and ecological concerns. By prioritizing *local time*, these journalists produced fluid, nonlinear accounts of Arctic tourism that fused deeper historical legacies (e.g. colonialism) with concerns about the future (e.g. rapid Arctic warming). These narratives conveyed a greater sense of temporal urgency, with calls made for swift action in response to issues relating to the rapid intensification of Arctic tourism. Such temporal narratives were primarily situated in local news media and featured the strong presence of local, Indigenous voices.

Prioritizing tourist time

In her chronicle of an expeditionary cruise with *Adventure Canada*, travel and lifestyle reporter Jennifer Bain (2019) recounted how, when a tour guide asked passengers what they hoped to see, "people shouted out polar bears, icebergs, wrecks, new parks, woolly mammoths, narwhal and the aurora borealis." This resonates with what tourism scholar Olivia Jenkins (2003) calls the hermeneutic "circle of representation" in tourism promotion. After tourism marketers use travel media to project certain images of an attraction, tourists, in turn, desire to see and reproduce the same images on their own vacations (ibid., p.308). This produces iconic destination images that are continuously reproduced by tourism marketers, travel media and tourists alike. After offering her own impressions of these iconic Arctic attractions, Bain described "Daily life" in Inuit communities where tourists have "a chance to meet fellow Canadians living in harsh, isolated conditions." Her voyage is later likened to "A floating classroom" where passengers take advantage of an "ice-free travel window," between late August and mid-September, to consume these iconic natural and human attractions.

Bain's article is exemplary of travel journalists that prioritized the tourist time of an "ice-free travel window" over longer views of the local impacts and concerns surrounding Arctic tourism. As Table 9.2 reveals, the same group of natural and cultural attractions were frequently represented across the sample. Particularly in legacy media and travel blogs, where journalists depicted the same group of attractions in two main ways. Firstly, by offering detailed accounts of visiting one or more of these attractions. In these uncritical accounts, travel journalists recounted experiences viewing "magnificent creatures" on the Arctic tundra, cruising among a sea of "bergy bits," or learning about local customs and culture from Indigenous "cultural ambassadors." Another approach was to provide readers with "bucket-lists" of attractions and popular itineraries, such as: "Things to do in Nunavut," "10 reasons why Canada's remote Arctic wilderness is the perfect summer escape" and "Complete guide to Churchill, Manitoba: Polar bears, belugas and more!"

Table 9.2 Salient attractions and themes in Arctic travel journalism

	Legacy (21)	Blog (14)	Local (29)	Total (64)
Arctic wildlife	12 (57%)	13 (92%)	12 (41%)	**37 (58%)**
Polar bears	9 (42%)	8 (57%)	4 (13%)	**21 (33%)**
Icescapes (sea ice, glaciers, icebergs)	11 (53%)	9 (64%)	1 (3%)	**21 (33%)**
Northern Lights (*Aurora Borealis*)	8 (38%)	4 (28%)	2 (6%)	**14 (22%)**
Northwest Passage	6 (28%)	2 (14%)	4 (13%)	**12 (19%)**
Franklin expedition/ shipwrecks	3 (14%)	2 (14%)	1 (3%)	**6 (9%)**
Inuit culture/Indigenous tourism	10 (47%)	8 (57%)	18 (62%)	**36 (56%)**
Emphasis on luxury cruises	9 (42%)	7 (50%)	15 (51%)	**31 (48%)**

Two salient themes across the sample (Table 9.2, bottom) were references to Indigenous cultural tourism and depictions of luxury cruises. These themes were frequently discussed in relation to the rapid growth of Arctic tourism. The luxury theme was most prominent in stories that detailed three popular Arctic travel itineraries: the expeditionary cruise (7 news items/6 blog posts), the "Arctic Safari" (4 news stories/8 blog posts), and northern lights viewing excursions (4 news items). Conspicuously absent from these linear, consumer-oriented narratives, yet again, were efforts to acknowledge or account for the carbon-intensive nature of these tourist practices. Instead, operating exclusively on tourist time, these promotional narratives failed to hold tourists and tourism operators accountable for actions with consequences that extend beyond the short duration of an Arctic vacation. As we shall see, it was in prioritizing local time that local journalists effectively linked tourist practices to a confluence of wider historical, social, ecological, and future-oriented concerns.

Prioritizing local time

In Table 9.2, the column labelled "Local" shows key differences in the way local journalists reported on Arctic tourist attractions. These stories placed greater emphasis on local environmental and social concerns stemming from the rapid intensification of Arctic travel and tourism. When popular tourist attractions, such as wildlife (41 percent) and expeditionary cruises (51 percent), appeared in these reports, readers encountered nuanced, relational, and community-based perspectives on these sightseeing practices. For example, local journalists connected a burgeoning wildlife tourism industry to enduring historical tensions between scientific and Indigenous conceptions of Arctic wildlife management. The headlines for two reports, detailing local concerns

about the growing popularity of polar bear viewing tourism, summed up this epistemological divide as follows: "Inuit, Western science far apart on polar bear issues"; "Conservationist sounds alarm over polar bears; Kivalliq Wildlife Board chair says bears 'can adapt to anything.'" Citing Kivalliq Wildlife Board chair Stanley Adjuk, Neary (2020) highlighted a causal linkage between a highly lucrative polar bear viewing industry and the heightened risks local communities must face as polar bears grow more accustomed to interacting with humans. As Adjuk put it, with more bears "coming into communities … [and] tourism going on all the time, we, the Inuks who live in the region start paying a price for it."

Another group of stories called attention to ecological harms and risks associated with the escalation of marine traffic in highly sensitive Arctic waters. This reporting detailed several sensitive issues ranging from ship groundings to oil spills, contamination and wildlife disruptions. These stories featured voices of local advocates, experts and officials who called for "more measures to keep people and the environment safe" (George, 2018). Other reports listed "appropriate safeguards," including the establishment of strict environmental protocols for cruise ships as well as dedicated federal funding to assist local communities in responding to accidents, ship groundings and oil spills. A recent study on climate change and Arctic tourism (Palma et al., 2019) echoed these local concerns, highlighting a lack of adequate safety regulations, infrastructure and the further amplification of climate change as key issues stemming from the growing presence of expeditionary cruise liners in Canadian Arctic waters. Evidently, it was local journalists who brought critical, local perspectives to bear on this popular form of Arctic tourism that remained conspicuously absent from travel reporting in legacy media and travel blogs.

Another definitive feature of local journalism was the salience of references to Inuit culture and Indigenous tourism (62 percent). This coverage featured a strong presence of Indigenous voices, with several items profiling success stories of Indigenous-led tourism initiatives. One such report (CBC News, 2018) centred on Arctic Bay Adventures, a Nunavut-based tourism operator that had received a national Indigenous tourism award "for maximizing social benefits while running an environmentally-friendly business." Similarly, *Nunavut News* (Neary, 2019) profiled the award-winning efforts of Levy Uttak, the owner of Igloo Tourism and Outfitting in Iglulik, Nunavut. The story detailed Uttak's efforts to employ a team of Indigenous locals to bring tourists out on the land "to see the traditional way of our area." Other stories incorporated the voices of community stakeholders to emphasize the importance of ensuring that Arctic communities gain more from future tourism development. The headline for a Nunavut News (2019) editorial captured these concerns succinctly: "Don't let cruise ship profits sail away." Another report cited a press release by Qikiqtani Inuit Association that described new tourism operation fees designed "to generate direct benefits for Inuit in communities impacted by tourism" (Tranter, 2019). These new fees extended beyond cruise tourism to cover a range of commercial tourism activities taking place on Inuit-owned lands, including wildlife observation, hunting,

camping, helicopter and plane landings. Unlike legacy and online travel news, these journalists prioritized local time by situating Arctic tourism in relation to historical legacies (colonialism), contemporary issues (redistributive justice) and future concerns (climate change).

Discussion

If travel journalism is to become a more responsible genre, it must extend its mandate beyond commercial incentives to offer up critical perspectives (Hanusch and Fursich, 2014) on the social and ecological problems caused or exacerbated by tourism. In Canadian legacy and online travel media, analysis in this chapter revealed that much work remains before such a standard can be reached. For one, across the sample, there was evidence of the under-representation of climate change in spite of the local climate impacts associated with long haul Arctic tourism. By eschewing climate impacts for growth-centered narratives, commercial travel journalists largely played into the hands of disaster capitalists (Klein, 2007) who have sought to create opportunities for affluent luxury tourists to consume ecological devastation and loss first-hand in the form of "unique" Last Chance Tourism experiences. While, in this sense, this chapter illuminated where Canadian travel journalism has failed, examples drawn from local reporting pointed to instances where counter-narratives emerged in response to rapid Arctic tourism growth.

One key instance where such a counter-narrative emerged was in the distinctive way that local journalists conceived of time. Shaped by unique settings and contexts for journalistic production, a temporal disjuncture occurred between journalists working for legacy and online travel media and those reporting on Arctic tourism in localized settings. In the case of the former, time was limited to the duration of the travel itinerary and, in turn, aligned with a well-established temporality of colonial exploration. In these commercial narratives, the centrality of *tourist time* erased longer views of historically, socially, and environmentally situated local tourism impacts. By contrast, in reporting by locally situated journalists, longer views of Arctic tourism emerged that prioritized *local time*. In this local reporting, readers encountered the voices of community actors with nuanced, relational, and community-oriented perspectives on the potential *and* pitfalls associated with contemporary trends in Arctic tourism. Finally, although climate change was underrepresented, the findings suggested that local journalists hold the potential to produce climate journalism that is attentive to local climate impacts (Gess, 2012), community needs and perspectives (Nettlefold and Pecl, 2020).

Conclusion

The coronavirus pandemic has halted international travel and tourism on a scale unprecedented since the birth of mass tourism in the post-World War II era. This global tourism pause affords travel journalists ample time to reflect on how to

reform their practices in order to produce work that is more inclusive, sustainable, holistic, and just. As this chapter has shown, doing so entails moving beyond tired promotional clichés and growth-centered travel narratives towards informing audiences of tourism impacts, and of the roles that tourists can play in mitigating such harmful effects. In the case of Arctic tourism, commercial travel media would stand to gain from greater dialogues with local journalists who offer deeper insights, knowledge, and community-oriented perspectives on tourism. Further, when it comes to climate change, travel journalists must begin accounting for the carbon-intensive nature of long-haul Arctic tourism and its local effects on human and nonhuman populations alike.

This critique of Canadian travel journalism and call for urgent reform aligns with what Callison and Young (2020, p.209) see as a larger moment of "rupture and reckoning between journalists, their organizations and publics." These scholars point to the emergence of a "systems journalism" approach as one way journalists are responding to this moment of reckoning. To exemplify the approach, Callison and Young (2020; see also Harp, 2020) draw on the work of Indigenous journalists, among others, whose situated knowledges and local connections offer a "view from somewhere" that is often found wanting in legacy journalism. What makes such reporting exemplary of systems journalism are attempts to recognize, synthesize and understand how particular news events interact and intersect with wider structures, values, power relations and impacts (Callison and Young, cited in Harp, 2020). In this chapter, a similar distinction can be made between the divergent ways in which journalists—working in distinct journalistic contexts—conceived of time. By prioritizing local time, it was local reporters who produced systems approaches that transcended the temporal bounds of consumer-oriented tourist itineraries. In doing so, they accounted for relationships between Arctic tourism in the local setting and the larger social and environmental systems of which it is part. Ultimately, by following the lead of local journalists and adopting a systems journalism approach, commercial travel journalists can provide more critical perspectives that serve to enhance public awareness of local tourism impacts while holding tourists and tourism promoters accountable for their actions.

Notes

1 *The Cruisington Times* is an online news hub for luxury cruise tourism.
2 *Nunatsiaq News* is the newspaper of record for the Province of Nunavut and the territory of Nunavik in Quebec (see https://nunatsiaq.com/about/). This vast geographic area encompasses the Northwest Passage and several other historical sites connected to the lost Franklin expedition (1845). As changing ice conditions open up the Northwest Passage for commercial travel, these sites have captured the imagination of tourism promoters and luxury tourists (see, for example, https://www.adventurecanada.com/arctic-expedition-cruises/the-northwest-passage).
3 See *Imperial Eyes: Travel Writing and Transculturation* (2007) for Mary Louise Pratt's seminal work on how travel and exploration literature functioned globally as an agent of European imperialism.

4 This is exemplified by the exorbitant cost of US$71,100 for a single berth on the Grand Arctic Voyage described at the outset of this chapter.

5 The authors distinguish travel journalism from "travel literature" or "travel writing", since the latter includes semi-fictional accounts of travel which deviate from the professional norms and standards that travel journalists are expected to abide by (Hanusch and Fursich, 2014, p.7).

6 Interestingly, McGaurr (2014, p.245) found that travel journalists tended to ignore climate change, among other environmental conflicts, regardless of who sponsored their travel.

7 See, for example: https://www.theguardian.com/environment/2019/may/17/why-the-guardian-is-changing-the-language-it-uses-about-the-environment

8 This includes five opinionated items that featured relevant commentary on Arctic tourism.

9 Founded in 2009, *MuckRack.com* is an influential global database featuring the work of over 30,000 registered journalists. Littau and Jahng (2016) list several attributes that make *MuckRack.com* a fruitful tool for journalism research, including journalist profiles that identify areas of coverage and allow for subject-based searching. The search criteria for this study was limited to journalists who identified as Canadian and maintained profiles that featured reporting on Arctic tourism.

10 TBEX is an influential networking platform for travel media that organizes a series of annual conferences and online events for "travel bloggers, online travel journalists, new media content creators, travel brands and industry professionals." I am grateful to Tom Griffin for bringing this organization to my attention. For more on TBEX, see https://tbexcon.com/about/#whatistbex

11 *The Planet D* is an award-winning Canadian travel blog and online information hub for travel bloggers (https://theplanetd.com/about-dave-and-deb/). For the list of Canadian travel bloggers consulted for this study, see: https://theplanetd.com/travel-blogs/#canadian-travel-bloggers

12 Several Canadian travel blogs featured posts on polar bear tourism in Churchill, Manitoba. Although geographically situated in the subarctic region south of the Arctic Circle, Churchill is widely known as the "Polar Bear Capital of the World." Because the town has long served as a hub for polar bear research and tourism, travel blogs featuring Churchill were included in the sample.

13 Explaining why such a limited number of Canadian travel blogs focused on Arctic tourism is outside the scope of this study. However, one possible factor is a divergence between the high cost of Arctic travel and the budgets of tourists most likely to consult travel blogs for information. Not surprisingly, the 6 travel blogs that featured posts on Arctic tourism were written by authors representing an affluent class of luxury tourists.

14 *Northern News Services* is an online news syndication service that allows users to keyword search for material published by seven northern-focused, independent news outlets.

15 Affiliated with the *Canadian Broadcasting Corporation* (CBC), *Eye on the Arctic* is an Arctic-focused online news service that features news content from across the circumpolar region.

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Part III

Temporalities of politics and religion

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10 "The Amazon is ours"

The Bolsonaro government and deforestation: narrative disputes and dissonant temporalities

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Introduction

In July 2019, the National Institute for Space Research (INPE)—a Brazilian federal institute under the Ministry of Science, Technology, Innovations and Communications—released data about a marked increase of 60 percent in the devastation of the Amazon rainforest by fires when compared to the same month (June) of the previous year. Brazilian President Jair Bolsonaro contested the data by calling it a "lie" and accused "bad Brazilians" of "campaigning against our Amazon" (O Globo, 2019a). According to the World Wide Fund for Nature (WWF-Brasil), historically the use of fire in the Amazon is one of the final stages of deforestation after the cutting of the forest (WWF, 2019). Days later, the Ministry dismissed the director of the Institute, the physicist Ricardo Galvão.

Due to its profound implications for the environment, the event turned into a crisis and took international dimensions. Germany has suspended funding for projects to protect the forest and biodiversity in Brazil and Norway has blocked transfers to the Amazon Fund in which the country is the main donor in response to Bolsonaro's failure to comply with the environmental protection agreement, which these funds were supposed to further. The incivility that the Brazilian president has shown in dealing with this ecological crisis, further sharpened international attention and has put Bolsonaro and his government's commitment to climate change under question in a series of international political and media commentaries.

Beyond the country's internal reactions, such as the dismissal of Ricardo Galvão, doubtful statements by his cabinet on issues of climate change and attacks on NGOs, Bolsonaro fueled an international conflict. In the context of the blocking of funds, he said: "Do you think it comes from a very big heart of these countries to help us? They don't want to help us. Everyone knows that there is no friendship between countries, there is interest" (G1, 2019). When French President Emmanuel Macron called the G7 members to discuss the Amazon issue, Bolsonaro responded by speaking of a "colonialist mentality"

(Neves, 2019) and was also involved in a childish episode of insulting Macron's wife in a social media post.

On September 24, 2019, when speaking at the opening of the UN General Assembly, Bolsonaro pointed to a supposed malicious campaign against him. Much of this speech focused on his fight against a communist threat and he resorted to the narrative of international greed for the Amazon, while he blamed NGOs and the international media for trying to defame him. Stating that it is a "fallacy that the Amazon belongs to humanity," the president revived conspiracy theories and encouraged the nationalistic ideology that "the Amazon is ours," an ideology that characterized the Brazilian military dictatorship—a violent and anti-democratic past that he looks back upon with nostalgia and longing.

Against this background, we elaborate on 1) the president's response to the fires; 2) how the editorials of Brazilian mainstream media—*O Globo, Folha de S. Paulo* (FSP) and *O Estado de S. Paulo* (*OESP*)—treated Bolsonaro's environmental stance; and 3) how both the president and the media responded to international environmental campaigns to "save" the Amazon rainforest. Do the president and the media follow the same path? Do they have the same concerns? How do they refer to the third element—international criticism? A key finding here is that the president, the media and international criticism invoke different and dissonant temporalities. On the one hand, Bolsonaro builds a nationalistic discourse through a nostalgic understanding of Brazil's past and through science denialism. On the other hand, the mainstream news media in Brazil kept the focus on the present, giving priority to the consequences of Bolsonaro's environmental position for commerce and international trade. Finally, both these positions clash with the future-oriented temporality of international environmental advocates campaigning for climate policy.

There is some influential work focused on the relations between collective memory and news (Zelizer, 1992) and on the connections between news media and temporality (e.g. Bødker and Sonnevend, 2018; Zelizer, 2018; Schudson, 1986). In this chapter, we continue such discussion by looking at different actors and their dissonant constructions of temporality in relation to the issue of climate change.

Bolsonaro—looking into the past nostalgically

Jair Messias Bolsonaro was elected president of Brazil in 2018 with 55.13 percent of valid votes in a fierce dispute with the Workers' Party (Partido dos Trabalhadores, PT) candidate, Fernando Haddad. Understanding the context in which this election took place is fundamental for understanding his victory, since the emergence of the new right in Brazil, represented by Bolsonaro, is deeply linked to *antipetismo* (Feres Júnior and Gagliardi, 2019a), the anti-PT sentiment. The 2018 elections were polarized around the PT, the party of previous presidents Lula da Silva (2003–2010) and Dilma Rousseff (2011–2016). Lula ruled for two consecutive terms, which ended with an 80 percent positive approval of

his performance (O Globo, 2010). Dilma, in her second term, was accused of minor administrative errors (Avritzer, 2018; Fontainha and Lima, 2018) and underwent a controversial impeachment process that took her out of office. Since her period as president political polarization has intensified. It does therefore not seem to be a coincidence that Sérgio Moro, the then federal judge who condemned Lula in the context of the *Lava Jato* Operation, a process that resulted in his imprisonment (when he was a pre-candidate in 2018), was appointed Minister of Justice and Public Security of the Bolsonaro government as soon as his victory was confirmed.

Running for a small political party, the Social Liberal Party (Partido Social Liberal, PSL), Bolsonaro was able to catalyze the *antipetismo* sentiment during the campaign; and, he had influential support from among others, the Pentecostal churches (Aubrée, 2019)—to whom he addressed his campaign motto "Brazil above everything. God above all"—and the mainstream press, which, despite also framing Bolsonaro in a predominantly negative way (Feres Júnior and Gagliardi 2019b), created a favorable context for his election by historically framing PT in negative way (Azevedo, 2017; Goldstein, 2017). The mainstream media thus contributed to the creation of a favorable scenario for the emergence of Bolsonaro's political project (Gagliardi, 2018).

A retired captain of the Brazilian Army, Bolsonaro began his political career in 1988 as councilor in the city of Rio de Janeiro. After two years in office, he was elected Federal Deputy by the State of Rio de Janeiro, a position to which he was consecutively re-elected for 28 years, until running for the presidential election in 2018. In almost three decades as a federal deputy he only had two bills approved. During his career, he represented corporate interests of police and military personnel and has been a staunch defender of the Brazilian military dictatorship. One of the trademarks of his campaign was a hand-made weapon symbol. In one of his public appearances, before being elected, he went on to say that the "mistake of the dictatorship was to torture and not to kill" (Forum, 2016).

The former Brazilian president Dilma Rousseff was a youth activist and was, as a political prisoner, tortured during the dictatorship (1964–1985). Later, during the process that took her out of the government, when Bolsonaro was a federal deputy, he voted in favor of impeachment dedicating his vote—in a public speech[1]—to Carlos Alberto Brilhante Ustra, colonel of the Brazilian Army that headed one of the most active organs of political repression in Brazil (Detachment of Information Operations from the Center for Internal Defense Operations—DOI-CODI) during the military dictatorship and was convicted on charges of torture (Caetano, 2019).

Bolsonaro's relationship with the dictatorship's past is peculiar since as it runs counter to the common practice of supporters to deny the existence of torture and to deny the regime's responsibility for the imprisonment and disappearance of people. Bolsonaro is not concerned with silencing these measures, on the contrary he proudly confirms the use of torture to combat the alleged communist threat.[2] This represents, therefore, a displacement that differs both from the first

movement towards the agreed forgetfulness inherent in political transition and from the construction of the recent memory of recognizing the systematic disrespect for human rights in the dictatorship discussing the adoption of remedial measures. It is about more than just remembering, but proudly remembering.

In addition to the question of human rights, the response to the pressure for accountability in the increasing forest devastation configured another opportunity for Bolsonaro to appeal nostalgically to the past. Historically, the Brazilian military has shared the view of the need to defend the Amazon against an alleged international greed—be it due to its natural wealth or its land area—that would threaten national sovereignty in the region (Castro and Souza, 2012). During the Brazilian dictatorship, there was a major nationalist development project in which the Amazonian territory was one of its main targets inside a broader plan of infrastructure and industrialization of the country focusing on national integration (Castro and Campos, 2015).

Unlike military governments, Bolsonaro does not have a clear national plan for the Amazon. Instead, his focus has exclusively been on making the exploration of the region more flexible in order to benefit private groups such as those linked to mining. It is not surprising that this perspective clashes with the rhetoric that has been gaining strength in the last decades of environmental and social justice. But it is noteworthy that Bolsonaro appeals to nationalist rhetoric as a political strategy when it suits him since this same nationalist discourse contrasts with the prominence of his liberal economic agenda and his response to social and environmental justice.

In terms of social justice the need to guarantee the rights (which have been historically denied) of Indigenous people has been discussed worldwide; this is, however, not the way Bolsonaro thinks with regard to Indigenous people and *quilombolas*. [3] In the pre-election period, in early 2018, he promised to ensure "not an inch more for indigenous lands" (De olho nos ruralistas, 2018), referring to the agenda of demarcation of Indigenous Lands, for which this people have been fighting, literally, for a long time, against logging invaders, agricultural and mining companies.

At the end of 2018, after he had been elected, he declared that "Indigenous in reserves are like animals in zoos" (G1, 2018). In response, the Articulation of Indigenous Peoples of Brazil (Apib) placed this issue as one of the points in an open letter addressed to Bolsonaro a week later. Among the issues, Apib demanded that the Constitution be complied with, claimed the ignorance of the newly elected president about the Constitution, emphasized that Indigenous lands belong to the Union and that they cannot be traded. In addition, Indigenous people demanded their rights to be respected, as well as their wish to live in isolation.

In his speech at the UN General Assembly in September 2019, Bolsonaro suggested that Indigenous leaders are sometimes used as "a piece of maneuver by foreign governments in its informational war to advance its interests in the Amazon" (Betim and Marreiro, 2019). While attacking Indigenous people, Bolsonaro made promises, such as the forgiveness of accumulated debts (Forum 2018) and the possession of rifles (Canal Rural, 2017) for rural landowners.

On another occasion, in the previous year, in 2017, Bolsonaro appeared on video being disrespectful to quilombolas: "I went to a *quilombo*. The lightest Afro-descendant there weighed seven *arrobas*. [4] They don't do anything! They are not even good for procreation" (Simões, 2018). Related to the government's contempt for social and environmental justice is the factor of economic exploitation of land. After advocating against the demarcation of Indigenous land, the government recently signed a project that provides for mining and power generation in Indigenous lands (Mazui and Barbiéri, 2020).

Nationalist discourse was also drawn upon when, denying knowledge about climate change, a few days before the election, Bolsonaro threatened to withdraw his country from the Paris Agreement—in which Brazil committed, in 2015, along with 195 other countries, to reduce the emission of gases that contribute to the greenhouse effect in order to contain global warming. To justify the measure, Bolsonaro claimed that the agreement represented a threat to national sovereignty, a way of losing control of the land to other countries (Terra, 2018).

Beyond the argument of the loss of sovereignty, Bolsonaro's lack of respect for environmental preservation is not new. In 2012, the then federal deputy was fined after being caught fishing in an ecological station protected by law (Reserva Ecológica dos Tamoios, in Rio de Janeiro state). In the next year he presented a bill to the National Congress to disarm all inspectors from Ibama (Brazilian Institute of Environment and Renewable Natural Resources)—which imposed him the fine in the previous year—and ICMBio (Chico Mendes Institute for Biodiversity Conservation) in field actions. The measure was an evident attempt of retaliation against Ibama since it clashed with his own speech of defending easing possession of weapons. And, indeed, this is pertinent as Ibama inspectors are often threatened in the areas they work due to the incidence of environmental crime, which would justify the permission to carry weapons. In 2019, Bolsonaro referred again to the same environmental reserve, stating that he planned to release spearfishing in *Reserva Ecológica dos Tamoios* which according to him, "preserves absolutely nothing and makes a rich area, which can bring billions (of reais) per year to tourism, [which] is stopped due to the lack of a more objective, more progressive view of it" (Lemos, 2019).

The lack of an environmental agenda when he became a candidate for president is also noteworthy. His government plan was the only one among all the candidates that had no mention of climate change and deforestation; he just mentioned that a new structure would be created for the agricultural and livestock issues and mentioned three vague actions about stimulating renewable energy sources (Observatório do Clima 2018). He also promised to extinguish the Ministry of the Environment, merging it with the Ministry of Agriculture (G1, 2018), and making it easier for the agricultural agenda to become the flagship of the Ministry, reducing environmental problems to rural issues. After his election, however, he went back on the decision to cut the Ministry of the Environment and appointed Ricardo Salles as Minister, announcing the decision on his Twitter page on December 9, 2018. Salles is a lawyer and participated in the creation of the "Movimento Endireita Brasil"[5]

(Jucá, 2018), whose proposal was to lead a strong opposition to the Lula government. In addition, he was Secretary of Environment of São Paulo during the right-wing government of Geraldo Alckmin, and was convicted of administrative impropriety, for defrauding documents of the Management Plan for the Environmental Protection Area of the *Várzea do Rio Tietê* (SP), which included the modification of maps produced by the University of São Paulo (Azevedo, 2018).

Before Salles and after the elections, still in 2018, Bolsonaro said he would nominate as Foreign Minister the diplomat Ernesto Araújo, who during the electoral period maintained a blog to defend Bolsonaro, presenting guidelines against PT. Araújo believed that climate change was "scientific dogma," and that the left transformed the issue into an indisputable ideological strategy, a globalist agenda that dominates independent states. Araújo also said that such an ideology was Marxist and, therefore, anti-Christian (Di Cunto, Araújo, and Freitas, 2018).

Bolsonaro's anti-environmentalist position may seem outrageous to those who have been fighting for territorial and identity recognition of Indigenous, riverside and *quilombolas* communities, and for environmental activists who have been fighting for global awareness. Bolsonaro sees the struggles for social and environmental justice as being the same thing and reduces both discursively to a conspiracy theory arguing that they serve the international interest and against what would be an authentic national interest. He employs nationalist discourse, ignoring indigenous people and the broad scientific evidence that supports the call for environmental responsibility. Because of this, his government is also a step backwards with regard to the rights acquired by these groups.

NEWSMEDIA: a market-driven grounded view

In order to investigate how the mainstream press approaches Bolsonaro's positioning, we took as an example the case of increased fires in the Amazon rainforest in the first year of his term. For this purpose, we considered the three main Brazilian newspapers—*O Globo, Folha de S. Paulo (FSP)* and *O Estado de S. Paulo (OESP)*—and made a search for editorials containing the words fires [queimadas] and Amazon [Amazônia] through these newspapers' own digital collections between August and December, 2019. This procedure led us to 28 editorials—11 from FSP, seven from *O Globo*, and 11 from *OESP*. We found this period relevant because during this time there was an international debate on the subject, specifically on Bolsonaro's reaction.

We understand the media as a political institution (Cook, 1998, 2006; Sparrow, 1999) in interaction with other actors that produce certain narratives of politics. In this matter, editorial opinions play a relevant role in political debate, due to their potential in shaping political debate in the public sphere (Firmstone, 2019) and as articulators of policy views (p. 1996).

The editorials of *Folha de S. Paulo* (*FSP*) place Bolsonaro in the center of the narrative. What appears as important is primarily how much the

president's denialist position has the potential to be an obstacle to trade agreements, especially the agreement between Mercosur and the European Union. The adjectives often used to characterize Bolsonaro's performance in this period demonstrate condescending and critical language: "clumsy attitudes," "cluttered" and "mess" (FSP, 2019d), "bravado" (FSP, 2019b), "lame ideas" and "syncopated spasms" (FSP, 2019a), "unreasonable" (FSP, 2019e), "stumbling" (FSP, 2019c).

It is worth noting the lack of focus on Bolsonaro's past public speech on environmental issues. Only one FSP editorial (FSP, 2019e) mentions in passing that his response to Amazon fires fits with his already announced positioning in the presidential campaign regarding social and environmental justice. Although the three newspapers reported on Bolsonaro's environmental clashes at the time they occurred, this was not mentioned in the selected editorials. With regard to Brazilian environmental policy, in general, we observe the lack of approaches to what the country has done in the past. Likewise, we do not find prospects for the future under discussion of the theme, since the possible consequences presented are exclusively linked to present political outcomes.

In the case of *O Globo*, Bolsonaro's government is also a target of criticism. According to the newspaper, Bolsonaro builds—with the contribution of his Environment Minister (Ricardo Salles)—crises for himself with an "erratic environmental policy" (O Globo, 2019d). The anti-environmentalist discourse and the dismantling of surveillance systems are also pointed out as the responsibilities of the current government that, among other measures, dismissed scientist Ricardo Galvão from the position of director of the INPE after disagreement over the data released by INPE that showed an increase in deforestation in the Amazon.

Emmanuel Macron and Angela Merkel are other frequent characters in the editorials since the threat of commercial damage to the agreement between Mercosur and the European Union is also highlighted. While Macron is accused of seeking benefits for French agriculture by suggesting to the G7 not to sign the agreement, Merkel is praised for having stopped the proposal, suggesting instead to include an environmental clause in the agreement.

In relation to international trade disputes concerns regarding agribusiness stand out. *O Globo* reminds us that after the electoral victory, Bolsonaro announced that Brazil would leave the Paris Agreement, although he stepped back from this later. According to the newspaper, it was

> a shock for those who are aware of how the country, amidst obstacles, has advanced in improving its image in dealing with the environment. Among the frightened, it includes the modern part of agribusiness, the most dynamic sector of the Brazilian economy, strongly exporting, and the concern was and is with the risk of a boycott of Brazilian food, if they originate in areas of environmental devastation.
>
> (O Globo, 2019c)

On an earlier occasion, the newspaper expressed the same concern: "Everything that has been built up to date in terms of image of an agricultural sector that does not harm the environment of careful exploration of the Amazon is turning to ash" (O Globo, 2019b). What matters in *O Globo* is the image of Brazil with regard to the defense of the environment because of its commercial consequences, with a focus on agribusiness. Therefore, one of the main concerns is to reinforce that forest protection and agricultural activity are compatible.

Just like *FSP, O Globo* editorials of this period lack discussions of the future consequences of fires and deforestation for the Amazon rainforest, for local communities, for the country and for the world. Likewise, there are no discussions on Bolsonaro's historically disrespectful position on the environment, although his current anti-preservationist position is affirmed.

Considering *OESP*, we found very similar concerns as in the other two newspapers. The most prominent is that, as well as in *O Globo, OESP* emphasizes the economic consequences for Brazilian rural producers if the restrictive measures considered by the European market are implemented. It is with this basic concern in mind that the newspaper criticizes the president and refers to the "Bolsonaro cost" as a result of a "clumsy foreign policy," of "the government's poor way of dealing with international criticisms of fires and deforestation in the Amazon," which is "causing enormous damage to the country's reputation" especially since the agribusiness sector "accounts for no less than 44% of total Brazilian exports" (OESP 2019d). There is a marked concern with the defense of agribusiness whose image is misrepresented by the president when not handling the crisis in a sensible way. Along with this, there is the same concern of *O Globo* that the crisis could affect the image of Brazil and the fear that transmitting the mistaken impression that Brazil does not take care of its environment (OESP 2019e) could influence the confidence of buyers of Brazilian meat and agricultural products and foreign investors (OESP 2019d).

Trying to offer a way out of this issue, just as *O Globo* did, *OESP* also invests in presenting the preservation of the environment and agriculture in the region as compatible activities, due to the concern with foreign investments in Brazil (OESP 2019f). This is then linked to the responsibility of another group of actors: the expansion of criminal organizations in the Amazon (deforestation, land grabbing, corruption of public agents) calling for its repression (OESP 2019b).

Also like *O Globo, OESP* states that there is commercial interest in international criticisms of Brazil. According to the newspaper, the

> international shouting around the alleged escalation in the devastation of the Amazon rainforest embodies many interests of European countries whose agricultural producers compete with the powerful Brazilian agribusiness - and the damage to the country's image has the potential to undermine Brazilian competitiveness abroad, in a market that is increasingly sensitive to environmental issues. Thus, it is good for the Brazilian

government to emphasize that not all criticisms of the way Brazil deals with its forests are disinterested.

(OESP, 2019c)

This argument is reinforced when the newspaper says that "everyone knows that Europe's farmers would be satisfied if their Brazilian competitors were confused with deforestation and suffered the consequences of this in international trade" (OESP 2019c). In doing so, the newspapers helped to minimize the environmental issue, arguing that a dispute over commercial reputation overrides it.

Regarding Bolsonaro, as observed in *FSP, OESP* often uses adjectives that give more prominence to the president's particular personality than to his responsibility in office, like his "unrestrained and conflicted way" (OESP, 2019e) to act in "reckless" ways and with "untimely attitudes" (OESP, 2019a). Most editorials do not discuss his scientific denial position, except one editorial on the climate issue that explores the problem of global mobilization more widely, criticizing scientific denialism and this also highlights the importance of reconciling "environmental needs and economic demands" (OESP, 2019c). OESP blames Bolsonaro for emphasizing an ideological discourse that electrifies his own supporters, but that harms agribusiness (OESP 2019d).

Similarly to *O Globo, OESP* also assigns the president the responsibility for starting the crisis with the "untimely attitudes towards the environment, thoughtlessly adopted by President Bolsonaro and some of his ministers" (OESP, 2019a), and goes further by suggesting that the matter would be improved if Bolsonaro did not intervene—"when the Bolsonaro government does not get in the way, national problems acquire a more realistic dimension and, above all, concrete possibilities for solution arise" (OESP, 2019e). Just like the other two newspapers, *OESP* neglects Bolsonaro's past of a historic anti-environmental discourse, and perspectives on the future in the specifically environmental theme.

After looking at the three newspapers in our specific selection, it is clear that while *FSP* puts emphasis on the political framework of the crisis with a predominant focus on criticizing Bolsonaro's position, *O Globo* and *OESP* highlight the commercial consequences of possible retaliations against Brazilian agribusiness production. Thus, the fires and deforestation of the Amazon rainforest are not addressed in terms of those directly impacted but are observed from the fear of damage to Brazil's image and its commercial consequences.

In the three newspapers the president is the target of criticism and there is some complacency in the reaction, either by the use of adjectives that, in a certain way, infantilize his performance, as in the *FSP* and *OESP*, or in the consideration that he simply should not "get in the way," as if it were enough for a president to refrain from an issue to deal with it.

Unlike other cases in which it was suggested that the future temporal orientation as predominant in print media (Tenenboim-Weinblatt and Neiger, 2015), we observed that the approach to the burning in the Amazon and the response of

the Brazilian government are anchored in the present with the main concern being the consequences of the context for the performance of agribusiness in the international market. It could be argued that the notion of future is present even in the vision focused on the market, since it is a concern with the effects of certain actions. In fact, different and complex temporal layers may be found since time is a constitutive element of news items (Neiger and Tenenboim-Weinblatt, 2016). However, we would like to differentiate here what we consider immediate consequences for certain actors—which, it happens in a short period of time, almost concomitantly with the action that originated it, that is, in the coming days or weeks—from what we see as a shared future as the outcome of an environmental policy (or its absence). In this sense, we understand this type of immediacy more broadly as a view anchored in the present. It is also worth mentioning again that, with regard to climate change, a central topic in our discussion, the notion of the future does not stand out.

Taking that into account, and looking back at the focus on the immediate consequences for the agribusiness market, what would explain this predominant interpretation? First of all, it is essential to emphasize that the media system in Latin America is characterized by an oligarchic media ownership and how, according to Hughes and Lawson (2005), the media owners retain conniving relations with political elites that barely allow a separation between ownership and editorial control. Therefore, it is not surprising that such close relations contribute to a refutation of diversity in the coverage.

On the other hand, it is not difficult to identify alliances between media owners and agribusiness either. An illustrative example is Rede Globo's continuous engagement in the creation and diffusion of an advertising campaign focused on ("Agro is tech, agro is pop, agro is everything") attempting to present a modern image of agribusiness through dozens of advertising products. The campaign is far from being the only strategy that shows this alliance. In G1,[6] a *Globo* news website, there is a section entitled "Agro," in which this sector is presented as "the wealth of Brazil." Trying to link agribusiness to the ideas of progress, modernity and even sustainability, the social issues, relationships and working conditions within this sector are obviously not addressed, as well as the fact that the large agricultural production is basically destined for the international market, while most of the domestic food comes from family farming (Nobrega and Bandeira, 2019). This is neither exceptional nor new: *Folha de S. Paulo* has its origins in *Folha da Manhã S.A*, a newspaper that, in the 1930s, reinforced the editorial line aimed at the "farmers of São Paulo" (Nobrega and Bandeira, 2019).

The option for the aspect of agribusiness is therefore more than a temporal choice. We could interpret it in terms of the expression of concern for the future being shifted from a perspective that could be assumed to be general (environment) to a particular one (profit for some groups). In the Brazilian case, it means to understand that, despite claiming to be a defender of the public interest, the market-driven view of the mainstream news media cannot be ignored.

Looking back, looking forward

Before the 2018 elections, Brazil occupied the place of a negotiator and leader in environmental research but this image has gradually been deteriorating over the last two years (Sengupta, 2018; Hughes, 2019) of Bolsonaro's government. The president addressed this issue and together with his ministry made official measures that directly weaken the recent construction of climate policies; he also made numerous statements that go against efforts to affirm climate and social justice worldwide.

Bolsonaro embodies the nostalgic desire to reactivate the past in which the exploitation of natural resources by the elites did not come up against the limits of environmental awareness and the past of the military dictatorship in which authoritarianism and a lack of transparency allowed the government to make decisions without the embarrassment of other instances. He therefore mobilizes nationalism, referring nostalgically to the discourse that the Amazon is ours, but internally subordinates it to interests linked to economic exploitation in an ambiguous way, as when he said he wanted to explore the Amazon together with the USA, exterminating minority groups' rights, as Indigenous and *quilombolas* communities.

The media, when addressing the Amazon fires in 2019 in their editorials, gave little visibility to these ambiguities, shifting the issue to the point that interests landowning elites in the country. Thus, it remained grounded in the present and loyal to the agenda of international trade that benefits private companies. Neither of these two actors—the President, or mainstream news media—spoke predominantly from the future-oriented time perspective, which remained reserved for environmental activists. This scenario has several consequences. One of which is the fact that the success of political solutions (either locally or globally) to ensure environmental protection depends on national support. Bolsonaro's stance weakens the understanding of environmental protection as a legitimate obligation and therefore does not encourage any compliance with the complex issues of climate change.

Finding these important political actors relying on dissonant temporal layers to build their own interpretations of the issue means not denying the fact that different temporal layers may coexist in each discourse. What we have done was to look into the most salient layers on the specific issue examined. This debate that still needs much more incursions shows that a focus on temporality helped to understand the complex context in which consensus is still far off.

Notes

1 "Bolsonaro exalts Ustra in the 2016 impeachment vote. Estadão," August 8, 2019. Available at: https://www.youtube.com/watch?v=xiAZn7bUC8A.
2 Unpublished paper: Gagliardi, Juliana; Afonso de Albuquerque; Marcelo Alves dos Santos Junior. "'Pela memória do coronel Carlos Brilhante Ustra': a política da memória na votação do impeachment de Dilma Rousseff."

3   Quilombo communities or quilombo remnants are Brazilian ethnic groups whose origins
    date back to slavery and are currently organized around their identity. Although the
    beginning of the movement to claim these groups for their visibility is linked to the so-
    called rural black communities, today the agendas of these groups are extended to urban
    settings since the effects of this historical period have produced numerous ways of exis-
    tence in Brazilian territory. It is fundamental to emphasize that quilombo communities or
    remnants of quilombo were incorporated in the Brazilian Constitution of 1988 as a result
    of the struggle for recognition of their territorial rights, and thus, access to ownership of
    occupied lands is a central point of the means of recognition of groups (Velásquez 2014).
4   Arroba is the measure used to weigh cattle.
5   "Straighten up Brazil Movement," in free translation from Portuguese. The term
    used in Portuguese (Endireita) also points to a right-wing (direita) option.
6   https://g1.globo.com/economia/agronegocios/

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11   Spiritual temporalities

Discourses of faith and climate change in Canadian petro politics

Darren Fleet

Introduction

> We were losing. Damnit, we were losing this thing. But when the dust settles and smoke clears, the city I love is still going to be there. That's because Fort McMurray's greatest asset is not the Oil Sands. It isn't the money or the work it provides or the houses and city streets. Fort McMurray's greatest asset is its people. The 88,000. It's the strong, tenacious, and loving people that is its greatest natural resource.
>
> (Welsh, 2016)

For a few smoky days in the spring of 2016, Pastor Lucas Welsh was the human face of Fort McMurray, the northern Albertan town at the heart of Canada's bitumen industry and the nation's leading source of growing greenhouse gas emissions. The national broadcaster, the CBC, featured Welsh's story about fighting the blaze that nearly razed the entire town, burning up more than 2,000 buildings in the span of a few days. "In the moment, I didn't see God, I didn't feel God," he said. "My faith was in me. But looking back, it is also what carried me" (Warnica, 2016). In saying this, Welsh expressed how central time was to his experience of the fire. In an instant, the social and economic infrastructure of the oil sands that had seemed so permanent to him immolated before his eyes. But this was not the only way that temporality impressed upon his understanding. The eraser of time for the months of evacuation in which the town was empty of most people revealed a greater truth: when God is distant, he is most close; disaster had made real a more transcendent timeline.

What was unique to Welsh's story is that in addition to being a firefighter for Suncor (one of the largest oil sands producers in Canada), he was also a part-time pastor at a local evangelical church. The novelty of his faith paired with the tragedy of the fire served up an opportunity to tell a different type of story about the blaze, and about oil.[1] His experience of the fire opened up a portal into a world that often flows beneath the radar in Canadian public discourse. While climate change and the future of fossil fuels are front-and-centre in contemporary public discussions and media debates, faith perspectives on these issues in Canada are relatively absent in mainstream legacy media.

Canada's faith profile

According to the most recent Canadian census, 76.4 percent of Canadians identify as having faith, as opposed to the non-religious. Of these, 67.3 percent identify as Christian, the majority Catholic with the exception of the west of Canada where protestant affiliations, both mainline and evangelical, are predominant (Statcan, 2011). These are intriguing figures although they tell an incomplete story. Importantly, the census question does not assess the sincerity of belief nor degrees of expression like church attendance, prayer, or volunteerism, but rather affiliation and identity. As well, because the question on religion is asked only every second census, the figures are nearly a decade old. For a more generative faith profile one has to ask more specific questions of faith than what the census offers. One of Canada's leading sociologists of religion, Reginald Bibby, co-sponsored a national Ipsos Reid poll in 2015 on the topic, the findings of which offer a more up-close and detailed look at the national character of faith. The poll found that 30 percent of Canadians *embraced* religion, and that 23 percent of Canadians attended a religious service on a monthly basis (Hutchins, 2015; Bibby, 2017). Subsequent polling by the Pew Foundation found that of Canada's religiously engaged population, nearly half, or 10 percent, are conservative evangelicals, suggesting that they are statistically the most committed believers in the country (Coren, 2017; Lipka, 2019). This bears particular importance in oil-producing western Canada wherein protestant faith, both mainline and evangelical, is the majority (Statscan, 2011).

Anecdotally, we can also see how faith shapes the beliefs, values, and life experiences of many of Canada's leading political voices. For example, former federal Green Party leader Elizabeth May, former federal Conservative leader Andrew Scheer, federal NDP leader Jagmeet Singh, and Alberta United Conservative Party premier Jason Kenney are just a few of the more popular politicians in Canada who identify faith as being an essential component of how they view the world. And of course, prior to Justin Trudeau, former Conservative Prime Minister Stephen Harper was Canada's first evangelical PM, an active member of the Missionary Alliance tradition, a socially conservative Pentecostal faith that emphasizes end-times thinking known as the rapture (McDonald, 2011). Additionally, the popularity of a divinely inspired creation was reflected in a 2019 poll that found nearly 1 in 4 Canadians believe in a 10,000-year-old earth, a uniquely Judeo-Christian formulation of the cosmos (Little, 2019).

Canadian petronationalism

Along with his faith, the conservative Albertan PM Stephen Harper brought with him to the national stage an infused brand of hard power aspirations and petrol economic sensibilities. He led the country from 2006 to 2015 and oversaw the greatest economic boom in Canada's hydrocarbon history. At its peak, Western Canadian Select, the product produced from oil sands extraction, traded at over $100 USD a barrel, bringing significant rents to Alberta and federal transfer

revenue to the rest of Canada. Beyond a greatly expanded industry, one of the most significant legacies of the Harper era is an emboldened petronationalist project, the attestation of Canada as uniquely wedded and indebted to fossil fuel production. This emergent sentiment constitutes a powerful subset within a multifaceted Canadian culture war that is currently being waged, in part, by far-right politicians, energy lobbyists, and corporate fossil fuel campaigns through articulations of oil and the nation (Gunster, Fleet, and Neubauer; 2021; McCurdy, 2020). In power, Harper's expressed vision for the nation was to transform Canada into an "energy superpower" (Taber, 2006). This political and rhetorical move sought to pivot the country from its perceived post-war soft power Liberal party brand—associated with international peacekeeping, multiculturalism, the national healthcare system, and multilateral global engagement on environmental issues— to a more extractivist, free market American-aligned vision of Canada (Gunster et al., 2021; Taft, 2017; Gutstein, 2014; Martin, 2010). Emblematic of this ideal, former Conservative Minister of the Environment Jim Prentice described Canada's vast resources and extractive industries as "who we are and what we do" (Barney, 2017, p. 78). This is also the time during which environmental activists who opposed expanding Canada's fossil fuel infrastructure were described by Harper's Natural Resource Minister, Joe Oliver, as "foreign funded radicals," alien to the body politic (Oliver, 2012). Alberta bitumen, the third largest proven oil reserves on the planet, was, and still is, a key ingredient of this idea for the country. The "symbolic nationalization" of the industry, however, is not reflected in actual national ownership of the oil sands or the industry as a whole, which remains heavily reliant on global investment and private shareholder ownership (Gunster, 2019). Still, such narratives find fertile grounds in the long history of identifying Canada with colonial, settler, extractive, and geographical landscapes (Dalby, 2019; Ekers and Farnan, 2010; Saul, 2009; Sandilands, 1999). In the context of climate change, it is important to consider how petronationalism builds upon existing, and contested, traditions of identity by offering affective, temporal, and symbolic linkages to the fossil fuel industry as an expression (and source) of Canadian values, aspirations, and ways of life.

Media review

The emerging field of energy humanities forefronts questions and provocations of how fossil fuels construct social realities. From this perspective, meaningful action on climate change needs to account for the structures, cultures, and imaginaries that petroleum produces (Malm, 2016; Boyer and Szeman, 2014; Urry, 2014; Huber, 2013). Time is an important component of this configuration because petrol, in its production and consumption, implicates unique experiences of temporality. The mass use of oil in the 20th century ushered in new expectations and realities of space and mobility. Over the span of only a few generations, vast physical and economic distances could be traversed at speeds unknown in human history. As Mathew Huber notes, oil is not merely a substance it is the "lifeblood" of North American modernity

(Huber, 2013, p. 47); oil *is* freedom. The resulting petroculture, (the idea that we live in a world that is materially, socially, economically, and politically configured by fossil fuels), invites considerations of how carbon-based fuels shape the social imagination (Szeman et al., 2016). Accordingly, if oil is somehow embedded in our cultural identities then we should also be able to see it articulated in faith. Additionally, in communication scholarship there is a long tradition of understanding space and time binding technologies as media forms. Highways, bridges, and cars as much as radios, telephones, and internet connections facilitate the flow and capture of information and cultural transmission, suturing our day-to-day collective identities together (Barney, 2017; Greaves, 2017; Charland, 2009). In his seminal work, *Bias of Communication,* Harold Innis (2008) argues that communicative mediums shape political and bureaucratic formations. Contemporary uses of Innis thus configure fossil fuels, and pipelines in particular, as media (Barney, 2017). As such, energy infrastructures are unique sites to explore the cultural and communicative intersections between fuel and faith.

Two stories of faith and fossil fuels

November 29, 2016, marked a turning point in Canada's extractive policy agenda. With a new, self-acclaimed, climate-conscious Liberal Prime Minister, Justin Trudeau, the national government vowed to both continue to develop the oil sands and to address the nation's soaring carbon emissions and climate impacts. The flagship policy item of this approach was Trudeau's approval of the twinning of the existing Kinder Morgan pipeline with a parallel 1,150-km pipeline from Edmonton, Alberta, to Burnaby, British Columbia. The goal of this project was to triple the capacity of the existing route, pressing another approximately 600,000 barrels of bitumen per day into service, and to open up new export opportunities for Canadian oil sands to Asia. In exchange for granting the industry its much-sought gateway to the west, (now called Trans Mountain Pipeline and owned by the Canadian state), Trudeau promised environmentally concerned Canadians the Oceans Protection Plan and a national carbon tax. The two-year span following this announcement saw massive discursive and physical mobilization against Trans Mountain's approval, including public rallies, mass arrests, and court injunctions against opponents blocking access to the Kinder Morgan Burnaby Mountain processing facility near Vancouver, British Columbia.

In my doctoral research, the character of faith discourse in relation to fossil fuels during this period reveals several unique features of how the story of belief is told, as well as identifies key tensions and absences (Fleet, 2021; Fleet, 2019a; Fleet, 2019b). Using the media database Canadian Newsstream, this research showed that from November 1, 2016 to November 30, 2018, 34,087 stories about the oil sands and fossil fuels were featured in English-language legacy media newspapers in Canada. Of these, 556 (1.63 percent)

included faith perspectives, Christian or otherwise (Fleet, 2021; Fleet, 2019a; Fleet, 2019b). When culled for duplicates and relevance (faith terms must appear in relation to fossil terms) the total result is 171 stories (0.5 percent).

Significantly, the research found that *Postmedia* accounted for 71 percent of the final sample. The conservative media conglomerate dominates much of the private media landscape in Canada and owns such major Canadian dailies as the *National Post*, the *Financial Post*, the *Edmonton Journal*, the *Ottawa Citizen*, the *Vancouver Sun, The Province*, the *Montreal Gazette*, as well as the urban *Sun Media* chain, among others. Adding to this concentration of meaning, 45 percent of all stories in the entire sample were dedicated to just two events both appearing only in *Postmedia* outlets: a 2018 political row over the awarding of federal grant money to an anti-pipeline activist group in British Columbia but not to a Christian charity in Alberta, and Prime Minister Justin Trudeau's 2017 listening-tour stop in Peterborough, Ontario, where he was criticized for his proposed national carbon tax by a self-identified Christian single mother (Fleet, 2021; Fleet, 2019a; Fleet, 2019b).

Qualitatively, looking at the entire sample, two types of narratives about faith and fuel emerge. The first, and most dominant, is a story of spiritual petrol gratitude embodied in the lifestyle and creature comforts that fossil fuels provide to imagined Christian Canadian subjects. Promoted by *Postmedia* columnists and reporters, Canada in these stories is articulated as a proud staples-producing nation rooted in frontier and extractive histories, from the colonial fur trade to 21st-century oil sands production. In this rendition, fossil fuels are but the latest in a long line of resources that hard working Canadians pull from the ground to build the nation. As such, any climate action policies that would seek to limit, curtail, or excessively regulate industry not only harm producers, but are mediated as challenges to the meaning of Canada. Such stories are not uncommon in *Postmedia*, which has a long history of boosting the fossil fuel resource sector in Canada (Gunster and Saurette, 2014), including a recent appeal to one of Canada's largest oil sands lobby groups, the Canadian Association of Petroleum Producers, to "bring energy to the forefront of our national conversation" (Uechi and Millar, 2014). Not solely for profit, this mythologized extractive labour is done with a blend of providence, technological ingenuity, and declarations of social care. This connection between oil, care, and the nation is captured in a column for the *National Post* titled "Like a hammer blow for the unemployed; How do out-of-work Canadians feel when they see government subsidizing their joblessness?", by climate sceptic and conservative columnist Rex Murphy. He writes:

> If you are an Albertan, or a Newfoundlander, or for that matter a person from any Canadian province or territory, who has been laid off and out of work for the past couple of years because of the downturn in the oil industry, and the fierce opposition to all efforts - pipeline construction - to revive it, the news that your federal government is funding summer

jobs for professional groups whose only goal is to kill the oil sands forever, must be a hammer blow to the head.

<div align="right">(Murphy, 2018, p. 14)</div>

This petronationalist appeal positions those who oppose Canada's fabled extractive traditions as biting the hand that feeds them. It also situates the Liberal government of Justin Trudeau as betraying the nation, despite him being the first PM in decades to achieve regulatory approval of an energy pipeline to the west. This fossil-fuelled narrative of social care takes on an additional Christian form in a *Postmedia* article titled "Trudeau faces lambasting at public forum," wherein *true* Canadians are interpolated as Christian energy subjects who are at risk of losing their hard-earned gains because of radical climate change concerns. Reporter David Akin recounts how a 55-year-old audience member, Kathy Katula, took to the microphone to address the PM at a listening tour stop. Describing herself as "a Christian, single, hardworking mom," she told Trudeau:

> I lived off Kraft dinner, hotdogs, whatever it took to survive … and I'm proud. But something's wrong now, Mr. Trudeau. My heat and hydro now cost me more than my mortgage. How do you justify to a mother of four children, three grandchildren, physical disabilities, and working up to 15 hours a day—how is it justified for you to ask me to pay a carbon tax when I only have $65 left of my paycheque every two weeks to feed my family?
>
> <div align="right">(Akin, 2017, p. 69)</div>

In response to Katula's question, the PM attempted to clarify the difference between the not-yet-imposed federal carbon tax of his administration and the province of Ontario's own carbon and energy cost plan by the then Kathleen Wynne provincial government. But, as Akin accounts, this clarification only further affirmed the discursive waters of Trudeau's divided loyalties. Here was the Prime Minister offering a justification for a complicated and out-of-reach set of environmental policies that has left this Christian woman in tears over the cost of home heating. He is promising a decelerated climate change hereafter, whereas fossil fuels affirm the here and now.

   The second narrative is a much smaller portion of stories dedicated to faith-based activists involved in civil disobedience and anti-pipeline activism, mostly occurring at the terminus of the Trans Mountain route in Burnaby, BC. These stories constituted only 15 percent of the sample and were almost always located in news rather than editorial sections and across various publications (Fleet, 2021; Fleet, 2019a; Fleet, 2019b). These more detached accounts expressed notions of spiritual urgency and ecological care in the face of an all-encompassing climate crisis—inclusive of environmental, social, and anti-colonial concerns. These articles often interviewed those arrested as a result of breaking the court injunction requiring protestors not to come within a certain distance of pipeline infrastructure. Typical reflections addressed the centrality of faith, and of being compelled to act as an affirmation of belief. For example, a reverend who witnessed the arrest of

faith-based activists at an anti-pipeline protest told *Burnaby Now*: "I think people should know they are doing this out of their deep Christian faith and need to protect the planet" (Boothby, 2018, p. 3).

The limited number of anti-pipeline faith-based perspectives relative to the overall context is not for a lack of faith viewpoints in Canada that challenge the more conservative pro-energy articulations of religious faith in *Postmedia* outlets highlighted above. For example, one of the first voices to pierce the emerging petronationalist narrative was that of a Catholic Bishop from the Diocese of St. Paul in Northern Alberta. In a 2009 pastoral letter titled *The Integrity of Creation & The Athabasca Oilsands*, Bishop Luc Bouchard wrote of the then Canadian government and industry boosters: "The moral problem lies in their racing ahead and aggressively expanding the oils sands industry even though serious environmental problems remain unsolved after more than 40 years of on-going research" (Canadian Press, 2009). A decade earlier, an Albertan Christian zealot named Weibo Ludwig committed one of Canada's most notorious acts of infrastructure sabotage by blowing up several sections of an Encana pipeline (Morrow, 2017). And perhaps most notably, on a visit to Fort McMurray in 2014, South African Anglican Archbishop and Nobel Peace Prize-winner, Desmond Tutu, described the Athabasca oil sands as "filth," driven by a culture of "negligence and greed" (Weber, 2014).

It is important to note that the ability to articulate moral claims is not unique to faith or spiritual practices, nor is it the focus of this argument to suggest that spiritual belief has an exceptional, or even necessarily helpful, set of prescriptions to offer in the contemporary moment. Rather, what is captured and assessed here is the constellation of media narratives in which expressions of Christian faith are constituted through journalistic practice. The interconnection between fossil fuels, greenhouse gas emissions, and global warming invites political and rhetorical equivalences as it has become increasingly difficult to talk about any of these issues in isolation. While these resource relations have important faith histories and temporalities in and of themselves, (for example, the historical relation between colonization, extraction, and dualistic Christian understandings of body and spirit, human and non-human, sacred and profane), what this work aims to reveal is how particular mainstream legacy media narratives represent only a few of the many ways that faith informs temporal questions of fossil fuel production and climate change. Additionally, religious and environmental communication scholars remind us that while it is tempting to draw a straight line between faith and environmental attitudes, faith is only one part of what shapes views on global warming. Importantly, political affiliation, regardless of faith, is consistently identified as the most significant determinant of belief in anthropogenic climate change (Jenkins et al., 2018; Marshall, Bennett, and Clarke, 2018; Marshall, 2014).

The temporal frames of pro-oil faith-based perspectives that dominate the media sample under analysis (and despite critiques outside of these media forums) are expressed through the language of mutual assistance and reciprocity in the immediate. Extraction allows Canadians to care for one

another through a petronationalist lens of employment, investment, and tax revenues that support things like health care, community services, and education. In opposition, a counter-narrative of care is also expressed over a broader temporal frame of future generations, the life of endangered ecosystems, and spatial and social relations that constitute an alternative accounting of ecological and economic time. These latter expressions of faith, (that of those faith leaders arrested in opposition to the Trans Mountain Pipeline) step outside of linear understandings of Christian eschatology into a more circular and expansive rendition of spirit in the world. This more displaced temporality is then mapped atop the contemporary extractive geography of bitumen transport routes. By stopping the construction of the project, future amortization on carbon debts are also cancelled; to act now is to act in perpetuity. Unlike their petronationalist counterparts, the identities that inform these expressions transcend national identity to more spiritual, local, and decolonized subjectivities. Canada, in so much as it constitutes a legitimizing entity behind the industry, is on the wrong side of God's story.

Overall, what these media narratives reveal is how the struggle over Trans Mountain is quintessentially a conflict over time: the need for a return on investment as counted over the lifespan of the project—the rate of return on capital—in opposition to the ecological rate of return on carbon. These economic and ecological imperatives overlap in turn with contested spiritual temporalities of care: the need to provide immediate substance for mythologized and deserving Canadian subjects through extraction, versus the need for a restructuring of how Canadians think about economy and care outside of the timeframes inculcated by fossil capital. It is to these layered questions of time that I now turn.

Spiritual temporalities

The pastors, ministers, and faith-based activists interviewed in this chapter were interviewed during the winter of 2018–2019. Interviewees responded to an online invitation to participate in the research and were invited based upon their physical proximity to the Trans Mountain Pipeline route and their denominational affiliation. Twenty-seven people in total were interviewed as part of a larger dissertation data set. Of these, four representative respondents have been selected for this chapter. Their perspectives are situated within the context of the public and discursive contestations over Trans Mountain Pipeline. All interviewees were aware of aspects of the broader political, cultural, and journalistic landscape they commented upon. In many cases, they were keenly conscious, and at times even self-conscious, of how their own perspectives, and the perspectives of their faith communities, are portrayed in Canadian media. For example, those on the conservative side of the spectrum were cognizant of how their views could appear out of step with popular public sentiments around climate change. Meanwhile, those on the progressive side of the spectrum expressed how they believed themselves to be up

against forces that wielded disproportionate cultural and economic power. Importantly, all interviewees perceived 'the' media to be a significant constraint upon the social and ecological realities they desired to see.

Collectively, they express two unique temporalities: life in stasis where time is experienced as painful, slow, and valuable (*time sacrificed*); and time as narrated by the promise of eternity in which the spiritual horizon offers parallel metrics of meaning (*time transcended*). These perspectives offer novel insights into the ways in which oil time (or industry time as shaped by the demands of production) and spiritual time (God's parallel calendar) interact, engage, and inform one another in evangelical contexts in Fort McMurray, as well as oppositional mainline protestant contexts in terminus communities on the BC coast at the end of the pipeline route. Importantly, each understanding has distinct parallels with competing logics of extraction: an urgent present in which the demands and pressures of the now precede, and yet discursively affirm, longer-term ecological, economic, and spiritual concerns. The latter narrative of transcendence is expressed through the promise of future riches, middle-class utopias, and sacred avowal both in this life and the next. Importantly, these perspectives are not reflective of the entirety of the faith perspectives they draw upon but rather offer insights into the particular entanglements of petroculture, identity, and faith that each interviewee describes.

How much longer God?

Pastor Jared, 29, is a worship leader at an evangelical congregation in Fort McMurray. His job is to serve the spiritual needs of the community. But as a migrant worker to the oil patch himself, he too has emotional and spiritual needs. For Jared, the town presents itself as a series of spiritual tests. How faithful can he be to the call that brought him here? How deep can he go into his relationship with God in the darkness and isolation of the long winter? Did he hear God right in coming to this place? "All people are vulnerable and susceptible when we're isolated to doubt or depression or discouragement or fear," he says. "So I think there's a spiritual need in the city to not equate the health of things based on how the economy is doing or the price of oil."

Nearly three years into his time in Fort Mac, Jared identifies clear and distinct seasons in his tenure. Long past the honeymoon phase, which he describes as a flurry of iPhone photographs, town explorations, and love for the evening sunsets, he is now coming deeper into the reality that he is no longer a visitor here, that the Alberta oil sands are his home. He says:

> Well, in life, you could get to a plateau where if you just hung on a little longer through the difficulty, you'll discover that uniqueness or the excitement about it versus just what's frustrating. And then you've got a second wind and you're like, okay, I could stay here a little longer … I've had a couple of times since I've been here where I'm like—is this where I want to live? It's challenging.

Jared offers nuanced and reflexive understandings on the relationship between fossil fuels and climate change. Expressing contrarian industry views in town can invite unwelcomed and negative responses, he says. He also brings to his faith a critical reflexivity regarding things in which "Christians haven't always acted like they should." With this in mind, he is committed to articulating his personal relationship with Jesus through an historical and reflexive lens—if Christians have been wrong in the past then they can certainly be wrong in the present. As a person committed to the example of Christ, he wants to ensure that his actions and ideals are reflective of the character and message of the saviour, including reactions to fossil fuels and climate change.

The *Alberta Narratives Project* identifies some of the unique communicative and affective features of the context that Jared finds himself in. The report—produced and designed by a leading group of environmental communication thinkers and which offers suggestions on how to have meaningful and productive conversations about energy transition in Alberta—states: "People's attitudes about climate change and its causes were also influenced by their personal connection to the oil and gas industry" (Marshall et al., 2018, p. 28). The report argues that it is difficult to challenge the ecological validity of an industry that is directly tied to one's financial stability and social identity. Accordingly, they encourage communicators to focus on shared values and personal experience, and to limit claims and expressions of urgency and the need for immediate, or radical, action.

Like many of those identified in the *Alberta Narratives* study, Jared is deeply connected to industry. In a very candid moment he says he is "part of a service industry, like McDonald's, [at] a church that serves a lot of oil workers." And while Jared accepts the connection between burning hydrocarbons and the greenhouse gas effect, the amount of popular media and contested opinion on the issue can be overwhelming. He says:

> [My] first reaction is to kind of go along with the sentiments of people around me. Some people might criticize that, like saying "you gotta make your own decisions," but it's hard to not feel as though the best thing is to build some pipelines, you know?

In a context where disbelief in anthropogenic climate change is openly available, (and often encouraged in varying degrees through provincial, industry, and cultural institutions), navigating uncertainty is a significant task. The 2018 Yale Program on Climate Change Communication *Canadian Climate Opinions Map* notes that the highest level of disbelief in anthropogenic climate change in Canada is in the Alberta oil patch (Mildenberger et al., 2018). Belief in the anthropogenic origins of climate change in the federal political constituency of Fort McMurray-Cold Lake is 30 percent. This is not only profoundly below the Canadian average of 60 percent, it is even lower than any other region in the United States—including oil-producing rural Republican regions in the south and midwest (the national USA average is 53 percent).

"It's an intense, extreme environment," Jared says. "The weather is extreme. Politics are extreme. Economy is extreme. Everything is intense." In this way, life in the oil sands is one of constant evaluation. Have I been here long enough? How much longer can I go? What is God saying? He marks each passing day by his ability to withstand it.

Spiritual carbon

Bryan, 35, is a pastor at a born-again congregation with approximately 500 members. He has been surrounded by the oil sands his entire life. As a child he grew up in Fort McMurray where his father worked in the industry and where he was exposed to perspectives that he says only being close to the source of one of Canada's most contentious industrial projects can provide. Bryan is wary of the science around anthropogenic climate change and in particular the impact, if any, that Albertan bitumen contributes to global warming. "I'm very sceptical of a lot of the voices that are saying that fossil fuels are leading our world to destruction in a very quick way. I think that that is alarmist talk" he says.

The day we meet, both Sunday services at his church are dedicated entirely to praising and worshipping God through music and songs. "I think we live differently when we think about the Second Coming" the worship leader pronounces between ballads. This perspective, of preparing for God's imminent return, is central to Bryan's beliefs. As with all issues in life, he first seeks God's intention before coming to his own conclusions:

> Our faith should drive us to always remember where the ultimate sense of truth comes from and who holds our future in their hands. I think we have a great misunderstanding or lack of information to even really be able to identify what happens with climate change.

Anything can be used for good or for bad Bryan says. And in his world, what he sees is oil sands dollars doing good things. His church sends missionaries around the globe, sponsors orphans in the developing world, offers financial and emotional support to single mothers in town, and provides childcare for those in need. He even describes how tithes from industry workers pay for his salary and how he funded some of his own education by driving trucks out on site. Without firsthand experience one can be swept away by the negative images, stories, and opinions of outsiders, he says. From Bryan's perspective, personal relations to production mediate an entire different set of understandings. Through his expressions we are invited to see how pipelines do not just deliver diluted bitumen and refined petroleum, they deliver identities, temporal frames, and worldviews that link the body of Christ throughout the globe. In this way hydrocarbons embody a divine character: oil not only fuels our tanks, it fuels the gospel. Most importantly, Bryan insists that we must consider the ways in which focusing on climate change obfuscates a broader temporal reality.

If this world does fall apart … I don't think it's going to, but if it did, I hope I don't play a part. God has a heaven where depending on how you interpret the Bible, he's gonna recreate this earth back to his former intention and essentially a new heaven, a new earth, and better. And those problems will go away in time. So, "God, how do I honour you with the resources you've given us now?" But knowing that if it does fall apart because man is not smart enough to figure out how to use it well, our future is secure, for those of us who have Christ.

Arrested at the gates

With the judge overlooking from the bench, Pat recounts how they delivered the final words of their personal statement to the court:

At our hearings we did not call witnesses but I would call them now: saints and ancestors, endangered, locally eradicated, and extinct species, victims of climate catastrophe. And I am content that they should judge what is actually sinister; what behaviour is egregious; who really threatens our safety; and what actions are in our interest—and the interests of our children; what is truly an expression of contempt.

Pat, a mainline protestant minister in an urban church on the BC coast, and Mary, a believer from a mainline Protestant tradition, were part of a series of protests on the property of Kinder Morgan, the multinational fossil fuel corporation who at the time owned the proposed Trans Mountain project. Along with many others, they were arrested, charged, and eventually sentenced to several days in jail for civil contempt, the count associated with breaking a court injunction to not step foot on Kinder Morgan property. Both Mary and Pat had responded to a call put out by local Indigenous nations to join them in opposition to the imposition of pipeline infrastructure on unceded aboriginal territory.

Each in their forties, the two described how after much prayer and ethical consideration, their faith had compelled them to take a stand. Mary says:

I thought well, I've got a bicycle lock, I've got a neck. And for a long time I'd been feeling, what is my role in the world? I've been kind of hibernating for 20 years, having children. And as my kids have got older I've kinda felt like, well maybe it's time for me to get back to just being me in the world, instead of somebody's mom. And so these old disturbing questions were coming back to me about what am I doing with my life.

For both Mary and Pat, fossil fuels are uniquely spiritual substances. Not only do they move our world, they move time. They constitute the future, structure our present, and reinvent our pasts. They see a world ordered by energy in such a way that visibility beyond them is opaque and obfuscated by the layering of

hydrocarbons in our lives. For them the logic of oil—in the hasty traversing from one project to the next—makes it difficult to find the stillness necessary to comprehend converging sets of crisis. Accordingly, the urgency that extraction imposes upon lived understandings of place and time requires a physical response to the reordering of life around the needs of industry. Mary states:

> To stand in opposition to the fossil fuel industry is to say that there is a reality beyond what industry can see. And it's in the soil and it's in the water and it's in the air. All of the created order is an embodiment of holiness. And that is something you cannot see when you commoditize the world. So that's the sense in which I see it as a spiritual battle.

For her, the unique power of fossil fuels is that they transcend time in a way that acts against more important ecological and spiritual accounting. And in being so integrated into modern life, they become inseparable, limiting the possibilities of other considerations. In this way, they are fused to our understandings of life and therefore creation itself. "The fossil fuel industry is sort of a metaphor for sin," Mary says. "I love this sin. I don't want to give this sin up. I live it, I'm part of it."

Sin of course is central to most Christian stories of creation wherein God expels Adam and Eve from the Garden of Eden because of their transgressions. In this metaphor, oil, like the sin of the Bible, infinitely separates humanity from intact relationship with the non-human world. And also like the biblical creation myth, overcoming oil is central to this story of ecological redemption. "Corporations and industries are also spiritual forces," Pat says. "Something different is unleashed when we tap into the spiritual in those engagements."

The rhetorics and metaphors they use to describe their relation to the Trans Mountain Pipeline have a long history in environmental thinking. Scholars like Carolyn Merchant and William Leiss have argued how Christian stories of origin and faith were conscripted into the broader discourses of the scientific revolution and emergent capitalism in the 17th century to shape a new sensibility to the non-human world (Merchant, 1990; Leiss, 1972). Importantly, a reconstructed mechanical worldview from an organic ideal, one rooted in post-Reformation European Christian dualisms of the body and soul, the sacred and the profane, led to the development of a novel comprehension of nature that could be infinitely disposed of. The emergent scientific world also carried with it an updated understanding of the divine—one that revealed nature as a geography of conquest, and natural resources as a manifestation of God's blessing and intention, a licence not only to exploit nature but to exploit other human beings (Moore, 2017; Vogel, 1996; Merchant, 1990). In the 20th century, the titans of petrol development, Howard Pew and J.D Rockefeller, held fervent Protestant views that in extracting oil they were doing God's work, locating spiritual providence in the exploits of a fossil-fuelled modernity and the perceived betterment of humanity through technology, innovation, and Christian-infused ideas of progress (Marshall, 2020;

Dochuk, 2019; Turner, 2017; Yergin, 2011). Also from this now dominant view of the natural world in the western context came secular articulations of the sacred and profane. Today, there exists a ubiquitous language of ecological damnation, salvation, and redemption in varied environmentalist rhetorics. This is perhaps most succinctly described in what Slavoj Zizek refers to in the film *Examined Life* as "a secular version of the religious story of the Fall" (Taylor, 2008): humans have fouled the non-human world; the resulting alienation can be overcome through acts of ecological contrition.

In Pat and Mary's articulations, fossil fuels carry with them competitive ontologies in opposition to their understanding of God's intention. As such, it is important for them that interventions disrupt and slow down the equations and computations of extraction. Pipelines traverse the spiritual boundaries of where the veil between heaven and earth is most thin, acting as spiritual forces in and of themselves. To put your body in between this temporal flow of fuel and faith is to insert oneself into a much broader and expansive horizon—the hope that what is unleashed on earth will also be unleashed in the spiritual realm. Mary says:

> We said many times going into it, this is not just a legal battle. And this is not just a political battle. This is a spiritual battle and I think a lot of what we were trying to do with the court part of the action was to demonstrate to the colonial court system that theirs is not the only way of understanding what's going on here.

Altogether, what these brief vignettes reveal is the complexities in which faith, fuel, and climate change are interlinked and expressed within the language, metaphors, and contested social realities of Canadian petroculture. Pastor Jared describes a complicated and nuanced reality in which the cultural and political articulations of oil challenge his own understandings of climate change. Oil time is almost entirely sacrificial time. It is about being faithful to the original call to commitment, weathering the emotional and spiritual ups and downs of the bitumen economy. Much like the wild swings of global petro evaluation which necessitates a longer vision in order to wait out the frequent investor doldrums, so too does the pastor keep his eye fixed on the overall ontological end game. God has called him to serve, and if it is in the Athabasca oil sands then so be it; there but for the grace of God go I.

Meanwhile for pastor Bryan, God's providence is evident in the riches that lie beneath the frozen boreal soil of northern Alberta. The oil sands are a testament to the type of life and comfort that God desires for us all. They are a gift from God. In recognizing the contested social terrain of extraction, the revelation that Bryan wishes for the world is that anything profane can become sacred when you see it through the eyes of the divine—even bitumen. Imperative is to be cognizant of the greater spiritual story at work and to not get lost in the details of any given moment. For him, when this earth fades away, whether in a superheated greenhouse earth or some other calamity, God will remain; they who have eyes, let them see.

For minister Pat and their partner in ecclesiastical crime, the experience of temporality is perhaps the most personal and yet also expansive. Within the messiness of life, Mary finds grounding in the greater moral and spiritual temporality of sacrifice. Only, unlike their spiritual cousins in the oil patch who too have their eyes fixed upon the heavenly horizon, oil sands play the role of antagonist in this culmination of time. Likewise, the urgency through which Pat sees the relationship between pipelines and climate change is uniquely structured around temporalities of extraction and transcendence. Each is bound by duty and faith to be allied with the Indigenous water protectors defending the BC coast, preserving its ecological and social integrity for future generations against Alberta hydrocarbons. As an expression of this, they offer their bodies as a living sacrifice to counter the sacrifices of those at the other end of the line.

Conclusion: the house is on fire

To return to where we started, one of the things the born-again firefighting pastor's story unveils is how time is socially constructed through the experiences and the logics of extraction. The urgency with which the blaze devoured Lucas Welsh's town is the same urgency through which the entire planet is ablaze with CO_2, only it is not revealed as such. In the context of spirit and bitumen in Fort McMurray, AB, time is grating and slow—the hours, minutes, and seconds of toil often lived as granular as the ancient sands washed and cleansed of their bitumen deposits and then pushed through pipes across the continent. In this frozen moment one also experiences life simultaneously on hold and at the precipice of eternity, the labour saturated with ontological purpose. This spiritual relation is in many ways parallel to those believers who attached bicycle locks around their necks and spent slow, cold, and rain-filled hours attached to pipeline infrastructure in Burnaby, BC, hoping to halt even just a few moments of bitumen from reaching tidewater. Among other understandings of temporality, what we see in these portrayals are two articulations of time, sacrificial and transcendent, each entwined with the other.

What is also revealed in these interviews are some of the rich and contested expressions of protestant Christian belief in Canada and how these renditions both challenge, and affirm, particular narratives in English-language legacy media. In relation to arbitrations of time and climate change, what the conversations and media analysis in this chapter show is the varied ways that faith both informs, and maps atop, beliefs and thinking about ecological crisis. Importantly, an exploration of petroculture into the realm of faith suggests further cleavages in information deficit approaches to environmental behaviour change, and how it is communicators might consider engaging with spiritual subjectivities more expansively. Petrol shapes the cultural terrain as much as it shapes the physical one. In doing so, it configures the ways that climate change is mediated and perceived in our lives.

Fossil fuels collapse vast expanses of space, labour, and time into thousands of discrete moments of petroculture: light switches, home heating, mobility, ethics

of care, hopes and dreams for the future, even national identities. In some of the expressions of Christian faith explored here, and in particular those located in mainstream legacy Canadian media, fossil fuels speak to the blessing of God in the here and now, illuminating the impermanence of time and obfuscating broader spiritual temporal realities implicated in the climate crisis. In the resulting terrestrial ambivalence, all that is required of us is to render unto to Suncor that which is Suncor's, and to render unto God that which is God's. And yet for others, such articulations are precisely the spiritual and temporal tables that faith needs to overturn. The heightened spiritual urgency that climate change invites is not the Second Coming, but counter logics of temporal sacrifice; the world will not end in the revelatory rapture, though it might end for us. In this rendition, the mediation of the climate crisis is inherently ontological—time felt as both fixed and elusive between the realms of human and spirit. For environmental communicators and climate-focused journalists these sentiments and stories speak to a generative space in media that has yet to be fully explored in fossil fuel coverage. There are few shared values as powerful as faith. While particular media organizations in Canada dominate the discursive field of expressions of Christian subjectivities in relation to fossil fuels and temporalities of climate change, this is not for a lack of other possibilities.

Note

1 It also served as an opportunity to proselytize to the local population. Welsh's church hosted more than 50 volunteers from the American Christian organization, Samaritan's Purse (headed by leading evangelical Franklin Graham), to help with clean-up and to provide counselling and spiritual care for those returning home (Samaritan's Purse, 2016; Warnica, 2016).

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12 Journalism as eschatology

Kairos and reporting a materially changing world

Dominic Hinde

Introduction

During the writing of this chapter, the world was hit by the novel Coronavirus pandemic, transforming everyday life with knock-on impacts for the economy and the climate. The events of 2020 laid bare the weakness of multiple industries that relied on constant material flows and consumption from oil to aviation, entertainment and mass retail. In several countries news organizations laid off staff as sales and advertising spending plummeted, with calls for rescue plans to forestall a collapse that threatened to decimate an already weak industry. Journalism found itself simultaneously documenting but also subject to a global disruption with potentially long-standing impacts, illustrating its entanglement with the same processes it seeks to represent and reminding us heavily of the materiality of both.

For exasperated journalists of climate, tantalizing glimpses of car-free cities, an end to air pollution, resurgent social solidarity, and the chimeric possibility of decarbonization offered a brief solidification of a post-carbon imaginary, yet the shutdown and spluttering restart of the complex entanglements of globalization also brought with it sudden poverty for millions, confrontations with technology and power, and material challenges to the already fragile promises of capitalist modernity. In this moment John Hartley's maxim that journalism is the "primary sense-making practice" of modernity (Hartley 1995) found renewed resonance as people turned to journalism and its cosmopolitan gaze to unpick the situation, yet as Mark Deuze (2006) has asked, what kind of modernity does it then make? Moreover, whose modernity does it make? As Gurminda Bhambra (2016) suggests, ostensibly progressive European and North American dreams of cosmopolitanism and global space which underpin such visions of global concern and worldliness are blind to their own positionality. Modernity's view on itself, with its claims to objectivity and global thought and its specific norms, often carries the pretence of a "view from nowhere" (Callison & Young 2020, p. 24; Bonneiul & Fressoz 2016, p. 147), which smooths the inconvenient edges of earth histories and chronologies and reductively obscures material relationships of power. Fundamentally, such critiques challenge both journalism's claims to realism and invite questions about how capable it is of engaging with crisis—of

climate, economy and technology—in more than representational form that might provoke responses engaging with the idea of the global story in more expansive ways.

I approach this question as someone with several years of experience reporting on international issues in an increasingly brutal financial landscape for US and British media, caught in the space between material and editorial demands of the journalism industry and the reality encountered on the ground. This not only entailed filtering global events in terms of the need to speak in a voice recognizable to the Anglosphere, but also an inability within extant genre forms to reflect the way in which multiple stories are deeply entangled with assemblages of climate, technology and economy. Paramount was the sensation that the world changing impacts of processes ongoing—flows of people and capital, climate effects and technology—were remaking modernity in such fundamental ways that journalism had become incapable of making sense of the situation, struggling at an impasse.

With this in mind, this chapter looks critically at journalism as a global sense making practice and phenomenological process, problematizing linear narratives and modernity's structures of time and expectation with regard to the material spectres of the present and near future. It focuses particularly on the way in which material conditions of modernity in the form of capital, technology and climate disrupt established chronologies, using the concept of qualitative *kairos*, time as a situational moment, to speculate on an eschatological journalistic gaze which embodies both the dissonance of the present and the potential for positive encounters with the future by seeing the present in terms of a reckoning. Through this, I consider how constructing the present as an eschatology provides freedom from existing constraints of genre, seeking to re-establish journalism's claims to realism by taking this material transformation of the world as a starting point.

Even before the events of 2020, journalism and journalism studies were preoccupied with their own temporal anxieties. McChesney (2016) and Deuze (2006), for example, have declared that journalism as we know it is dead, or that we are moving beyond journalism (Deuze & Witschge 2018). This has resulted in a range of scholarship confronting such fatalism (cf. Wahl-Jorgensen et al. 2016), but also provides an arena for critical reflection. Candis Callison and Mary Lynn Young, for example, have attempted to move past straightforward concepts of crisis and resolution, looking at what journalism "can and should do" through engagement with "deeper sets of historiographical problems" (2020, p. 3), which problematize journalism's own self-understanding and its historical deficiencies. In this regard journalism's anxiety provides an opening to reflect upon modernity more widely, with a material eschatology as a potentially productive frame whereby the future is characterized as an encounter with multiple materialities which haunt the everyday. Engaging with the disorganization and difference of the future, the potential for journalism as a handholding practice emerges through a realist approach to such entanglements, not least climate.

To this end I look first at the relationship between time, genre and journalism's claims to cosmopolitan truth on complex global issues. I then discuss

the contemporary drive to encapsulate global crisis with reference to the elite instrumentalization of the Anthropocene, but more importantly how journalism is contingent on its material impacts. I then focus more closely on eschatology as a framework for approaching the future, and of the role of *kairos* in conceptualizing the material opportunities for intervention of the present. Identifying distinct environmental, technological and economic components therein, I suggest how the entangled materialities of media and these components alter and transform the future, and how this relates to the ability of journalism to engage meaningfully with them.

"Global" journalism, time and the struggle for genre

Within journalism, genre is habitually understood as a marker of form with its associated repetitive structures. When events happen, journalism anticipates a select group of distinct outcomes; the final line or the news sign off proffers expectations about the future and journalists are expected to conform to such conventions, embodied in the concept of media logic developed by Altheide and Snow (1979) which emphasizes form and format as dominant factors in mediatization. Seen in this light, genre emerges as a facet of gatekeeping and power (Shoemaker 2020; Thorson & Wells 2015), whereby genre acts as a reflexive gatekeeping process. Furthermore, as Cheryl Kitch (2006, 2008) notes, journalism actively and wilfully engages in the construction of chronology through the production of representational "useful memory," assuming the mantle of historymaker from specific standpoints of power and reach to the exclusion of complexity.

Confronting this difficulty, the ecocritic Stefanie LeMenager (2017) talks about climate change in particular as a struggle for genre in which previous and current constructions of cause, effect, interrelation and time struggle to articulate the material conditions of the present. She characterizes climate reporting as a dissonant enterprise, noting that "As a genre, the news has long been a dystopian account of the everyday, anecdotes of catastrophe digestible with coffee, a training ground for forgetting all sorts of endings, including mortality" (ibid., p. 220).

This critique of news as a means of forgetting mirrors genre scholar Lauren Berlant's (2011) examination of genre and materiality and the concept of the genre impasse in particular. Berlant problematizes the frameworks of expectation which characterize narratives about the future, describing genre as a "loose, affectively invested zone of expectations about the narrative shape a situation will take" (p. 2), in which they "provide an affective expectation of the experience of watching something unfold," (ibid., p. 7). When these expectations do not map onto material unfolding, journalism's claims to realism become tenuous and it reaches an impasse.

The material entanglements of climate change ostensibly offer an opportunity to look up from domestic concerns and conventions and to forge new links between disparate times, places and communities, what journalism professionals and scholars alike have broadly defined as global journalism (Berglez 2008;

Hafez 2009; Herbert 2001). Attempts at global journalisms are supposed to be "democratic, unbiased, multicultural, ethical and cosmopolitan all at once" (Van Leuven & Berglez 2015, p. 669), operating on the assumption that such cosmopolitanisms are representative of the broader global issues which impact us all. Olausson (2014) for example documents how the hybridity of climate change reporting in global journalism creates a third genre of "extroverted domestication" as it seeks to trace links across time and space (ibid, p. 723). As Olausson also points out, however, there remains the question of whether European and North American modes of seeing the world remain too dominant (ibid., p. 855) through a continued tendency to write globality from above. In its quest to provide a corrective to perceived shortcomings, global journalism is often reduced to an "aggregate of national forms of communication," in which the selection of such "global" events and the way they are covered reinforces the national or local horizon (Beck 2016, p. 123).

East Asian, South Asian and South American perspectives which do not easily fit into the neat habitual division of the developed and the developing jar with the construction of the global as well. Environmental journalism in Japan, for example, operates on very different frameworks to Euro-Western principles (Masako 2016), whilst Brazilian journalism has been indifferent to the complex nature of environmental reporting (Mourão & Sturm 2018). Indeed the desire to assert journalism's usefulness as a mode of global understanding often resorts to claims about its representational potential, yet it remains bound to specific ideals and conceptions of time and modernity's unfolding. As Hermant Shah (1996) observed in his critique of development journalism, truly emancipatory development journalism attempts to subvert the embedded assumptions and conceptions of time and space perpetuated by "global" journalism practice in the subaltern, not least the need to produce journalism "from below" rather than from above. The idea of an organic cosmopolitan journalism thus emerges as an ideal as much as an implementable project.

Addressing this disparity and dissonance—between the imposition of global genres and events and the material realities faced by groups around the globe—the problems of constructing journalisms based on the superimposition of globality become clear. This also exposes what Berlant refers to as the chase for the good life inherent to Western capitalist modes of constructing the future, as reality produces new pressures on "managerial realism" in media (p. 257) which clash with the experiences and processes unfolding, what the new materialist Jessica Schmidt (2013) describes as "the [narrative] contingency of reality."

By being good global citizens and engaging with global issues (or risks and challenges to use the vernacular of policy makers and business leaders) climate and other materially disruptive processes can be integrated into conventional expectations about the future and forgotten. The convenient chronologies of such genre thinking are difficult to escape from, yet it is here that the prospect of eschatology as an exit from such form emerges. By envisioning journalism as an eschatological practice, we might reject the genre constraints of strict chronological unfolding and engage with the materiality of what we face.

Materiality, the "Anthropo-scene" and moving beyond representation

A lot of academic discussions of climate journalism today (at least in Europe), inevitably take place in the shadow of the Anthropocene as a concept. Since it began to gain traction following its historically canonized deployment by Paul Crutzen and Eugene Stoermer (2000), it has become both a geological talking point and an increasingly nebulous concept underpinning a range of attempts to make sense of modernity. This diversity and growth have allowed the development of what Jamie Lorimer (2017) terms the "Anthropo-scene" and media producers and scholars use the term as a synonym for any number of contemporary issues. Dipesh Chakrabarty (2018) meanwhile identifies how the concept is divorced from its meticulously debated scientific definition; the Anthropocene has become as nebulous and opaque as other semantically compromised terms like "sustainability" and "fairness" in discussions of global power and equity.

The term is also problematic beyond its vagueness, with critiques stemming from its ambivalence to the present crisis to its mislabelling as a product merely of a generic humanity and not, as Donna Haraway (2015) and Jason Moore (2017) have suggested, a history of capital's extractive drive constituting a "Capitalocene." This typology captures the histories of settler-extractivism and industrial growth that kick started the period, in which capital accumulation has accelerated alongside the familiar hockey stick graphs of emissions, GDP, communications technology and other markers of anthropogenic processes (Steffen et al. 2005). Some have even wryly embraced this cenification of the present and dubbed the immediate moment the Coronacene (Higgins et al. 2020), playing on the broader themes of disruption and material re-emergence from the past. This Gordian knot between the Anthropocene, capital and technology—what Kathryn Yusoff (2018) describes as "settler colonialism and the *thirst* for land and minerals—and second, as a category of the inhuman that transformed persons into things" in which objects become capital, is key to understanding its material power and how this should be confronted. Yusoff's call to an expanded material understanding of Anthropocene processes opens its effects up beyond the linear grand narrative of human expansion, but also beyond mere representation.

Attempting to trace the Anthropocene in journalism, Leslie Sklair (2018) finds the term scattered across different modes of reporting in multiple languages, exemplifying what Lorimer (2017, p. 8) terms an "intellectual zeitgeist," which "permits a more heterogeneous and speculative popular engagement." Such journalistic engagements can—in their enthusiasm for the Anthropocene concept—focus more on naming than doing however. Yet by emphasizing the way in which the Anthropocene (and climate) are deeply entangled with historical questions of labour, technology and power, we can locate the present moment within this entanglement, asserting journalism's claims to truth regarding the large-scale material changes in human–earth systems.

Though it seeks to represent the past and the future, journalism is fundamentally a practice of the extreme present. With a nod to non-representational, or in

the words of Hayden Lorimer (2005, p. 85) "more-than-representational," theory as pioneered in Cultural Geography, journalism can "pay close attention to the pantheon of influences occurring right now that affect and make possible what will happen next"(Parks 2017, p. 5). This invites constructive engagement with these entanglements of capital, technology and environment in the present which, as Amitav Ghosh (2018, p. 32) describes such material linkage, "are the mysterious work of our own hands returning to haunt us in unthinkable shapes and forms."

Eschatology and kairos

With this in mind, it is important to discuss how such materiality relates to the concept of endings. At its root, eschatology is the narration of the end times, but the end times of what? As Kyle P. Whyte (2018) points out, indigenous and subaltern peoples already live in a post-eschatological condition, whereby

> the Anthropocene or at least all of the anxiety produced around these realities for those in Euro-Western contexts—is really the arrival of the reverberations of that seismic shockwave into the nations who introduced colonial, capitalist processes across the globe in the first half-millennium in the first place.
>
> (Davis and Todd 2017, p. 774)

This is crucial to grasping how contemporary eschatologies function, whereby the promethean promise of the past visits material violence upon the present and the future. Eschatologies of modernity not only confront the past, but also operate with the knowledge that decisions made today will have far-reaching consequences into the future, leading to the present as a moment of recognition of such super-wicked processes, but also choice about their perpetuation.

Describing this material rupture, Donna Haraway writes that "the Anthropocene marks severe discontinuities; what comes after will not be like what came before" (2015, p. 160), recognizing the inevitable difference of the future. The divinity scholar Michael Northcott meanwhile, in tackling this eschatology of modernity, has described the present focus on Anthropocene problematiques as an archaeology of the future, in which modernity attempts to transform its own position into a staging post of something yet to come (2015, p. 105). As Northcott notes, eschatology is intrinsically linked to moments of *kairos*, whereby the present exists as a tension between future and past. *Kairos* (which fittingly in modern Greek means the weather), as opposed to the habitual linear understanding of *chronos*, constitutes what Smith (2002) describes as qualitative time, also interpreted as the right time (Kinneavy & Eskin 2000). Kairos thus represents "the indeterminacy and changeability of fleeting moments" (Kjeldsen 2014), and can address issues of "science, technology, risk society, visual activism, and media" far detached from its roots in antiquity (ibid., p. 252). As Kjeldsen discusses, genres represent recurring situations and can be anticipated

and controlled, but *kairos* is about that which cannot be easily controlled, recognizing the specificity of the present at a point between the past and future. Kairological time embraces the possibility for agency within this difference, going hand in hand with eschatological approaches which are both mindful of the past but open about the inherent difference of the future.

Journalism as an eschatological practice

The question which then arises is how such abstract perspectives might find form in journalistic practice. Journalistic eschatologies are plentiful in both apocalyptic and utopian form; David-Wallace Wells's *The Uninhabitable Earth* became the most read article in the history of *New York Magazine* when it appeared online in 2017 (Evans 2018), whilst media scholar Siobhan Lyons speaks of "ruin porn," which functions as "an expression of a very specific kind of anxiety that is rooted in humanity's transience, and our rising *awareness* of this ephemerality" (2018, p. 10). Such visualizations compete with transcendental visions of the problematic "good Anthropocene" (Hamilton 2016) of ecomodernist tech culture in which modernity is not haunted by its externalities and (eco)modernity becomes the salvation to its own disaster. This is typified by one of the more notable direct early engagements with the Anthropocene in *The Economist* that declared "the challenge of the Anthropocene is to use human ingenuity to set things up so that the planet can accomplish its 21st-century task" (2011, p. 11), whereby innovation functions as an ersatz confrontation with material reality.

Beyond the English-language we see the pseudo-Marxist eschatology of *shengtai wenming,* or ecological civilization, in the Chinese press (Halskov-Hansen et al. 2018), alongside the conservative eschatologies of contemporary populist media, whose temporality "unlike utopias […] assumes or asserts that there was a good life before the corruptions and distortions of the present" (Taggart 2004, p. 274). Such pastoral populism denies the eschatological implications of climate change and reinforces discourses of white power and extractive fossil practice (Malm 2021), or where it does engage envisages a malthusian racial apocalypse to mitigate climate change by "tackling" overpopulation (cf. Dyett & Thomas 2019).

In terms of genre, however, journalism must confront another eschatology, namely the shadow of Atlanticist liberalism as "the end of history" (Fukuyama 1992) in which remaining global problems are settled through managerial competence and enlightened market governance. Lent popular credence through elite journalisms, notably *The New York Times* and *The Economist*, whose "journalists were all aboard for the new world order." (Zevin 2019, p. 331), this steady state conception of liberal utopia now jars with the material conditions it has perpetuated. Some estimates put almost half of total historic carbon emissions as having occurred since the end of the Cold War (IEEP 2020, p. 23); it is through confronting such dissonance that journalism's claims to realism perhaps can be re-asserted, and consequently its ability to find pathways through this reality. As such, eschatology emerges less as a "a supermarket for apocalyptic scenarios"

(Beck 2016, p. 39), and more clearly as a mindset for realist engagements with material conditions.

In Europe and North America one notable example of this realist moment-making has been the output of the Dutch start-up *De Correspondent* and its English language namesake *The Correspondent*. A prime example of slow journalism (Le Messurier 2014), the project rejects the fast temporalities and structures of journalistic convention, with dedicated migration, climate, technology and inequality briefs which seek to illuminate key components of the present. Notable for hiring the Nigerian journalist OluTimehin Adegbeye as the world's first "othering correspondent," it has also been heavily influenced by the public historian Rutger Bregman and his project of utopian realism (2017). Through its critical subjectivity and an ethic of realism, The *Correspondent* combines ideas about historical inevitability with idealism about what journalism might be in order to curate uncertainty and to find both agency and hope within it.

Such start-ups are of course not representative of journalism as a whole, yet their focus on broader sets of historiographical problems and their engagement with deeper materialities seeks to be more than representational. Embracing material contingency and accepting that the future will be different, responses to it begin to emerge. Such embodiment moves from the *chronos of* procedural news to the *kairos* of dissonance and possibility. Eschatology presents itself not then as a fatalistic click magnet for voyeurs of catastrophe, but as a realist genre which is able to provide a constructive approach to the future. With this in mind, the STS scholar Sheila Jasanoff's theorization of the way in which "scientific and technological visions enter into the assemblages of materiality, meaning and morality" (Jasanoff and Kim 2015, p.4) is also critical, what Jasanoff describes as the sociotechnical imaginary. Tracing the materiality of these visions and seeing them as more-than-representational, these "hauntings" in Ghosh's words of technology, economic failure, and most critically environmental change, embody kairological possibility for journalism.

New technological materialities

In both the present and future, journalism and wider society must contend with what O'Hara (2020) refers to as digital modernity, in which data as immaterial capital is tradeable as a commodity through increasingly developed technological infrastructures, an assemblage in which lives are intertwined. Current debates around technology, power, distribution and control interweave with this chronology, in which we are confronted by technology as liberation theology (Diamond & Plattner 2012), but also by new questions of "labor [sic], political datavallience and privacy" which "speak to issues of power and to the relationship between our individual biographies and the larger tides of history"(Gregory 2017, p. 5). Burgess and Hurcombe (2019) note how digital journalism actively embody such anxieties, not only highlighting but also attempting to shape the trajectory of these changes alongside a burgeoning enthusiasm for the digital as, in Darin Barney's words, "infrastructure as an object of ideological investment"

(2018, p. 81). Alongside the "revolutionary" potential of data technologies in the media (Chow-White et al. 2020), Ouchuchy et al. (2020) have discussed how coverage of AI ethics speaks to broader misgivings about human agency and control, whilst Fast and Horvitz (2017) trace an interest more in the emancipatory benefits of such technologies. This idea of technological transcendence as hyperstition, whereby technological change becomes a self-fulfilling prophecy, results in such framings of technology as a "grand narrative" (Brennen et al. 2018, p. 2), relying heavily on PR-driven attempts to promote a moment of capitalist technological transcendence.

Such prominence is not, however, merely the work of the public relations industry, but the entanglement of what Barney et al. (2016) regard as a "participatory condition," or the involuntary entanglement of digital space. Technology and media have material form and as Parikka (2012, p. 98) notes, material roots through "long, messy networks in which one materiality is transformed into another one." Technology also plays critical roles in debates on resilience and climate through journalistic interest in technological fixes (Luokkanen et al. 2014; Scheer & Renn 2014), and journalism itself is intrigued and unsure about how technological acceleration will change the fabric of the profession (Latar & Nordfors 2009; Latar 2018), with media just as exposed to the new political economy of instantaneous mass information as other sectors (Arsenault 2017). Conversely though, such technological disruption also acts as a diagnostic for asking what role journalism might play in new forms of civic space (Callison & Young 2020, p. 44). Alongside familiar articulations of technology as a democratic tool, Jason Edward Lewis has also described an "indigenous future imaginary" (2016, p. 247) whereby the subaltern can attempt to annex the future through alternative digital modernities, allowing new journalism practice to emerge as a kairological intervention.

New economic materialities

The future is also haunted by the materiality of capital, albeit differently to a linear narrative of increased wealth and return on labour and endeavour. Following (but not exclusively due to) Thomas Piketty's publication of *Capital in the Twenty-First Century* (2013), there has been an explosion of interest in parts of the media about the behaviour of capital and what that means for work and labour, alongside inequality more generally. As such. there has been some response to "material reality and the empirical evidence of growing inequality" (Grisold & Silke 2019, p. 277), countered by strict genres of reporting which seek to delegitimize the radicalism of such proposals (Rieder & Theine 2019). As Knowles et al. (2017) note, financial journalism has been guilty of failing to adequately contextualize or warn about the dangers of the international financial system, falling prey to its own genre constraints which have prevented the articulation of alternatives. Returning to Berlant's concept of managerial realism, the material realities of worsening inequality come up against the enduring narrative of the good life and the promises of material betterment.

This return of capital to disprove its own promise is probably most visible in the editorial decision of the *Financial Times,* a bulwark of post-war Atlanticist thinking, to develop a self-styled "New Agenda" followed by a series of editorials attacking the contemporary economic settlement (Financial Times 2020). We have also seen the rise of radical digital economic journalisms—organizations such as *Open Democracy* (which has both English and Spanish versions, alongside Portuguese, Russian and Arabic), or projects such as the Indian Khabar Lahariya which seeks to carry out journalism from below as a counterpoint to the elite narratives of the Indian national press. Viewed from the present, the prospect of further global financial turmoil has very material kairological implications beyond counter-cultural media as dissonant material counterpoints enter orthodox economic chronologies.

The inequalities of both domestic and international economies also contribute to what Beck (2016; discussing the visibility of racial and economic segregation following natural disasters) defines as "Anthropocene class" (p. 83) and "Anthropocene positions" (p. 119). As inequality and economic change become apparent in media reporting of Capitalocene processes, these disparities also bleed into multiple forms of reporting. Ultimately, in both the global North and the developing world the good life is rendered increasingly chimeric as capitalism's externalities return to undermine its promise.

New environmental materialities

Lastly, we are confronted by the reality of a world transformed physically by climate change and human-induced environmental processes. September 2019 marked a new global high-water mark in terms of climate coverage globally (Boykoff et al. 2020), with concerns about Amazon wildfires dominating. The first months of the following year saw fires on bush and scrubland ravage (white) rural and suburban Australia, with much coverage by both institutional media and social media alike providing a global lens on the events unfolding, and catastrophic forest fires which deadened the sky across the Western seaboard of the US. From a material perspective, this seems to be only a foretaste of what is to come. If, as the IPCC suggests (Rogelj et al. 2018, p. 159), the world is set to experience at least two degrees of warming by missing pathways for carbon reduction, the material force of climate disruption will become a constant.

Pictures of burned-out cars with their hubcaps melted into silver tendrils and flame-red skies over the centres of digital capitalism allow dots to be joined. Every day media consumers confront climate presents and various climate futures as phenomenological events. As communities demand investment in flood defences in Northern England after catastrophic rainfalls, the people of Kolkata use record amounts of power to cope with skyrocketing daytime temperatures, or Cape Town almost runs out of water and Shanghai mobilizes to deal with mass flooding, the spectre of climate disruption looms large.

Such encounters with climate breakdown shift climate from a projected risk to an experiential process; we are invited to entertain eschatological visions of

environmental holocaust, but also to create pathways to fundamentally different and positive responses. Climate change creates disconcerting futures through its disruption of the present, but also invites a material choice between fruitful endings and apocalyptic endings. Recalling Haraway, what comes after will not be like what came before, and must not be.

Entangled eschatologies of journalism and global systems

In this entangled eschatology of technology, capital and climate, the prospect of kairological time permeates journalism. Disparate pieces of media on climate, technology and economics carry this temporality, but crucially such encounters should be seen not merely as representative but as *constitutive* of the present, and thus also of the future. As I have attempted to show, the relationship between genre, time and materiality invites us to consider our entanglements and assemblages as a collected *bricolage* of experience in which expectation shifts from the achievement or occurrence of one specific outcome to new zones of expectations about the narrative shape broader situations will take. The exact appearance of the world, and of what this change looks like is thus open to interpretation, but this pluralistic view nonetheless engages with a common temporality and materiality. The attraction of an eschatological perspective is not then so much its ability to envision disaster or salvation, but to engage with the present and the dissonance therein, and to attempt to constructively pass through it.

The year 2020 may have seen climate change competing in the headlines with another crisis at the human–environment interface in which the non-human world intruded on modernity in the form of a zoonotic pathogen, but the impacts on genre were the same. Forecasts of management plans and timescales for returns to normal cemented an impasse. Asking how journalism should relate to the unravelling of norms when confronted by such material intrusions, to navigate the reality of the present without resorting to deterministic and simplistic narratives of collapse and renewal or apocalyptic visions of modernity's end, we find opportunity for renewed claims to realism and sense making. As journalism itself toys with its own remaking, it can embody this material reflexivity in which the kairological nature of the environmental, economic and technological combine with journalism's own anxieties.

Faced with the material impacts of climate change, financial chaos for the second time in a decade, and the emergence of technologies which threaten to fundamentally reconfigure the social, journalism finding its genres means engagement with the eschatological implications of its own present. It might then seek to articulate futures which are both realist but fruitful.

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Afterword

Finding the stories in the big climate storm

Mark Schapiro

I recall the first time I met a "deep time" scientist, someone who speaks in million-year increments. It was in May, 2012, in Aarhus, Denmark, where I taught in the Journalism School over several springs. Between classes I sought out Mads Faurschou Knudsen, a professor of geo-sciences, who tracks the changing balance of gases in the atmosphere over time and how they impact conditions on Earth. I still recall being struck at how easily he spoke about the multi-million-year spans in the history of our planet as if they'd just happened last month. *Tick-tick-tick*, strung together like a multi-million-year datebook: The Paleocene, the Eocene, the Oligocene, the Pliocene, and of course the Holocene, our current epoch, when the balance of gases in the atmosphere, and thus the climate, made life possible for we humans and other organisms. "We burn off old carbon all the time on Earth," Knudsen said. "But now, carbon that might take millions of years to migrate into the atmosphere, we're doing that over hundreds of years." There it was, the backstory to the story of our time—a story ordained to us from the middle of the 1780s, when fossil fuels emerged as an energy source and the un-natural accumulation of greenhouse gases into the atmosphere commenced.

Then, here comes journalism. Bound by deadlines. Stuck in the present. Competing with a deluge of data points and an overload of disconnected information. There's always a delay between a flash of lightning and the sound of thunder: We are now experiencing the sound and the fury of the lightning bolt that was ignited in 1785. In planetary terms, that's a mere wink of an eye. But it's the time we're in.

Colleagues of mine, journalists of considerable talent and skill, have approached me from time to time with a query: "I'd love to figure out a climate story to do. But it's so big … " A reason it seems "so big," and thus inaccessible to many journalists operating under tight deadlines, is, for reasons articulated in this volume, its epic time frame. Which makes it easy to neglect the fact that included within that "epic" time frame is, of course, our own time.

My reply to such queries is usually something to the effect, "No, it's not so big. It's actually quite small." That's because there is no single "climate story." In fact, the very phrase "climate journalism" seems a bit of a misnomer. Indeed, to do journalism today in any field is to be reporting in an arena that is being

reshaped, distorted, changed by the changing climate. There are thousands of climate stories a day.

About a decade ago, I came upon a study that would change my view of reporting on climate change. The study, led by a hydrologist at the U.S. Geological Survey, concluded that current patterns of precipitation no longer bore a connection to patterns of precipitation dating back thousands of years. Climate change was altering the ebb and flow of atmospheric rivers, the patterns of condensation and evaporation, to a degree never seen before. Over the past several thousand years, there had been a reliable range of fluctuation between wet and dry years—a baseline range referred to by hydrologists as "*stationarity.*" Those fluctuation rates were no longer discernible. In terms of rainfall, we were flying blind. Most alarmingly, we could no longer predict the future based upon the past. The findings were published in the journal *Science,* with the title, "Stationarity is dead" (Milly, 2008).

What those scientists so powerfully evoked was disequilibrium in the atmosphere. The balancing act studied so carefully by Knudsen and others was jagged, out of balance, dissonant. Dissonance in the atmosphere, as we've learned, translates into profound changes on the Earth. And where there is change there is tension, and where there is tension there is, now citing every writer who's ever lived, a story. With an eye out for the "climate story," I saw that "Stationarity is dead" had application across every discipline: The impacts of disequilibrium wrought by climate change can be identified and reported on in every domain (Schapiro, 2016).

As the pace of broken-records for temperature and drought and extreme events accelerates (Schapiro, 2020), the status quo is in flux. Climate change is shaking up international alliances, increasing the value of some resources and decreasing the value of others, challenging long-standing legal principles, changing how food is grown, how diseases are transmitted and how 21st-century businesses contend with new levels of risk. It is revealing the vulnerability of some communities to fire, and others to the rising sea. It is expanding the notion of a public good, and heightening our appreciation for resiliency. And it shines a harsh light on the illusions integral to an economic system that systematically hides the financial and ecological impacts of the degradation to human and ecosystem health that is the result of these immense changes.

Those are just a few of the broad themes that anyone looking for a "climate story" can pursue. Never before have we had a human-caused phenomenon being experienced by everyone on Earth simultaneously. The impacts, however, are very different, depending on one's place on the socio-economic hierarchy and the luck of geography, or lack of it. When similar levels of extreme drought hit farmers in the American Midwest and farmers in northern Africa and Central America, as occurred in the years between 2011–2016, there was a huge difference in the consequences. American farmers, living in one of the richest countries, received tens of billions of dollars in crop insurance due to climate change induced losses, intended to ensure they stay on the land. By contrast, millions of Central American and African farmers, with no

such backup, were often compelled to leave the land that was no longer capable of sustaining them, and attempted to migrate north to the United States or Europe—thus, by no fault of their own, becoming pawns in one of the major political battles of our lifetime.

In short, climate change illuminates the fundamental forces shaping our society—who has power and who does not, who gets hit first by the degradations underway, and conversely who gets access to ecological benefits, and who is last in line for them. For journalists, there are compelling and sometimes tragic stories on these dual tracks.

In my own work, I've reported on how big finance responds to climate risk (Schapiro, 2015a, 2015b); on how effective carbon markets are in neutralizing fossil fuel companies' greenhouse gas emissions (not very) (Schapiro, 2010); on the role of forests in absorbing carbon and what happens when their use as "carbon offsets" occurs on Indigenous people's territory (Schapiro, 2009); on the ways in which the economic system is manipulated, in the United States, to hide the real costs of climate volatility (Schapiro, 2009); on how farmers are responding to the mounting stresses on their ability to grow food; and, conversely, where the seeds are that are most resilient to those changes (hint: They're not coming from any of the world's five major trans-national seed companies) (Schapiro, 2018a). I tracked seeds from the Middle East that are becoming key to the survival of crops in the American Midwest facing new pests and diseases, because they evolved in an increasingly similar climate, hot and dry (Schapiro, 2018b). The stories, as diverse as they might be, all have one thing in common: They're the result of, and a response to, ecological disruptions caused by climate change.

Nor should we neglect pointing out at every opportunity who is responsible for these and so many other monumental abuses. Climate scientist Richard Heede provided us with valuable insights when he concluded in the journal *Climatic Change* that over the years between 1854 and 2010 just 90 fossil fuel companies were responsible for two-thirds of all greenhouse gas emissions, laying a very precise sense of responsibility on their doorstep. Five of the top 20 are based in the United States (Heede, 2014).

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There is a principle drawn from the natural sciences which can also be helpful to journalism. The *trophic cascade* is a term used by wildlife biologists and other natural scientists to evoke the cascading impacts of the presence or absence of a species or set of conditions from an ecosystem. We need to apply that same lens onto journalism: Reverse engineer our way backward to understand the significance and distinctiveness of the disruptions that shape a story, then suggest what that story tells us of what lies ahead.

When I and my co-professor James Fahn designed the Earth Journalism course we teach at the UC Berkeley Graduate School of Journalism, we titled it to reflect this holistic approach. Climate change is also a unifying force, reminding us how intertwined our fates are with those of other humans and species, across national and ecological borders. The term reminds us how deeply

we are enmeshed with ecological networks of the Earth, as well as how to report on them. The "environment" is not something "out there." It's the very foundation on which life depends. You don't have to look far for the climate story.

Climate reporting is grounded in very specific locations and circumstances— each distinct, rooted in a set of characters and situations, often with broad resonance. Consider the space within a half-hour of your home and you'll find a climate story, from the changing migration patterns of songbirds that may have roosted in your backyard, to the too-early blossoming of wildflowers growing there, to the ways in which rising temperatures are transforming how the city of Phoenix, Arizona cares for the homeless population you might pass every day. Or, the farmer unable to grow crops suited to temperate climates, the ranger for the park down the block unable to obtain a reliable water supply, the café owner unable to obtain avocados due to drought, the dweller in what were once low-rent apartments based on higher elevated lands far from city centers suddenly being priced out as wealthy coastal dwellers realize that's the safest place to be. Or perhaps the Native American tribes in the Southwest who are suddenly flooded with inquiries on how their communities traditionally sustained their bean, corn, and squash staples for time immemorial in hot and dry conditions, the very conditions now being faced by food-growing regions across the world.

Sometimes the story starts with, well, something as simple as a nut. In 2019 I made numerous forays down to the Central Valley of California, a center of industrial agriculture, to follow the trail of the pistachio nut for a series of stories on how big agriculture is being impacted by drought and rising temperatures. It turns out that fruits and nuts indigenous to the hot, dry climates of the Middle East and Central Asia—figs, dates, pomegranates, pistachios— are turning out to be the saviors of industrial farmers facing yield drops and new diseases. Drought-tolerant pistachio trees are steadily replacing water-hungry almond trees. Inside the crunchy pistachio shells now proliferating across southern expanses of the Valley lies a climate story (Schapiro, 2019). Follow the cascade of that story and you'll soon land on the story of who picks those nuts and numerous other crops in the bounteous center of California agriculture, and the lands they come from facing climate stress.

The world we're reporting on is a living organism reshaped by those lightning bolts of 240 years ago. For journalists, it's the story of our time. For everybody, it's not just a story; it's the underlying reality of all life. Climate change indeed has an epic sweep, leaving millions of "small" stories in its wake.

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