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Journalism Education and Climate Change

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Abstract: Journalism's civic responsibility to the peoples of the world is to report accurately, truthfully, and knowledgeably about the threat of climate change. As journalism educators we must enable journalists of the future to be prepared for this challenge. This session will explore key issues in reporting climate change, such as how climate change science is communicated through the news media and how it is taught within the academy. It will also examine related economic, social and cultural issues. Finally, it will require journalism educators to examine the interdisciplinary nature and need to draw expertise from across universities to best equip students with the knowledge and understanding they need for quality reporting on the climate crisis.

Globally, journalism education sits at an intersection of two forces: a clarion call for action to address a climate emergency that is ever more present in the public imagination, and a nascent embrace of environmental reporting by all but the most entrenched climate change denying media outlets. It is a time for what Hackett, *et al*, call "ordinary journalism in extraordinary times" (2017, 1). Journalism educators face the challenge of all educators in determining how to integrate climate change in their teaching, but with the knowledge that their lessons will impact how climate change is communicated to the public in the decades to come. This report will outline relevant trends and suggest opportunities for engagement with climate change by journalism educators in the higher education sector in the UK and around the world.

Communication studies and the environment

Wide agreement that everyone, educators included, should be talking about climate change, is unfortunately mirrored by widespread reluctance to do so. As climate journalist David Roberts explained in a Ted Talk a decade ago, thought leaders tend to avoid the topic. He paraphrases one such unnamed "prominent pundit" as saying "It seems really complicated, I

don't feel like I have a good grasp on all the science and so I just don't feel qualified to go out and assert things publicly about it (2012)." Roberts adds that "anytime you mention it (on social media) the hordes descend, bearing complicated stories about the mediaeval ice age, or sunspots, or water vapour … there's a lot of myths about climate change borne by these climate sceptics,[i] but to debunk those myths … you have to research to respond to them in detail," and people don't bother. His talk, like Vice President Al Gore's presentations a decade earlier, sought to demonstrate that the science is, in fact, straightforward and clear.

The task is also urgent and, for professional communicators like Roberts, surprisingly difficult, due to complex manufactured structures of obfuscation, confusion and denial. It is the mission of educators to, firstly, equip their students with the confidence to understand the parameters of the problem and speak confidently about it and, secondly, understand the nature of the communications challenge before them and develop strategies to address it. Most of this report will focus on this second challenge. To address the first challenge, I'll point teachers who are new to this field, and/or don't have a background in the physical sciences, to the useful Communicating Climate Change: A Guide for Educators, from Cornell University. This open access guide offers an excellent orientation to climate science and the communications challenges that surround it.

Just as global warming is best understood as a recent human caused aberration in the almost inconceivably long timeline of the Earth's evolution, the portrayal of environmental crisis by mass media is best situated within the portrayal by literature, over two millennia, of a changing environment and the place of humans within it. This author has found valuable evidence of that tradition to inform the introductory lectures for his climate communication teaching in Johns-Putra's Climate and Literature (2019), which assesses the history of climate and literature from the perspective of the environmental humanities.

While most discussion of climate change and the media focusses on the representation of the problem and the role journalists should play, there are wider dimensions of the interaction between media and the environment for us to consider. Two sets of authors led the way for an environmentally informed reappraisal of media and how we study it: Tammy Boyce and Justin Lewis, with Climate Change and the Media in 2009[ii], and Richard Maxwell and Toby Miller, with their 2012 Greening the Media. These books set the stage for an intensifying research and policy focus on the environmental impact of the media and information industries and the world of "e-waste", culminating most recently in Benedetta Brevin's Is AI Good for the Planet? (2022).

Such authors ask us as communication educators to reflect on our contribution to one of the most environmentally destructive global industries, through our preparation of the next generation of media workers. It is the illusion of *immateriality* – the sense of an industry grounded in the production of messages, not objects – that diverts attention from "responsibility for a vast proliferation of hardware, all with high levels of built-in obsolescence and decreasingly levels of efficiency" (Boyce and Lewis, 2009, quoted in Maxwell & Miller, 2012:5). The recent book by Park (2021) expands the media frame to address how advertising, along with digital infrastructure and journalism, exacerbate the climate emergency; he builds a necessary link between media reform and climate change.

An essay in the online journal NECSUS observed,

> Environmentally engaged media studies calls for a radical reorientation of our curriculum. This includes not only the discussion of films, television series, and games about climate change, ecology, or the future of the planet; such a reorientation needs to go much further – for example by addressing the environmental footprint of the media products that we study, and of their distribution and consumption. Or by adding topics such as degrowth, environmental justice, and activism to our teaching agendas, by critically analysing discourses of innovation, or by scrutinising our 'collective desire for spectacle' that has an enormous ecological impact, as Hunter Vaughan[iii] argues … Integrating ecocritical thinking in the curriculum will be challenging (Keilbach & Pabiś-Orzeszyna, 2021).

Two recent books have focussed on the challenges which climate change poses for international journalism; both are potential core readings for journalism classes increasing the coverage of climate change. These are Journalism and Climate Crisis: Public Engagement, Media Alternatives by Hackett, Forde, Gunster, and Foxwell-Norton (2017) and, more recently, an edited collection by Bødker and Morris, entitled Climate Change and Journalism: Negotiating Rifts of Time (2022).

Trends in climate journalism

Veteran climate change journalists are quick to observe that the climate desk, to the extent it exists in newsrooms, is far from a new beat. In a recent webinar hosted by the WJEC (with the UK's AJE and UNESCO), retired Telegraph journalist Geoffrey Lean responded to an Extinction Rebellion representative's indictment of contemporary journalism for inadequate, even counterproductive, climate reporting by waving before his webcam a print story on impending climate emergency which he wrote in 1974. Lean bills himself as Britain's longest-serving environmental correspondent, with good cause.

In the US, former New York Times science editor Walter Sullivan battled reluctant editors to put that newspaper's first major climate change story on the front page in 1981, describing increasing scientific consensus about a "greenhouse effect". But even this was remarkably delayed. Environmental organisations had been publishing reports to the media about the threat of global warming since early in 1970s, with little uptake, as physicist and climate change historian Spencer Weart (2022) describes in his exhaustive online history of climate change advocacy in the US.

Contemporary journalism educators might ask their students to consider why global warming, and its possibly disastrous outcomes, was not consistently THE major global news story of the last two decades. There are too many published commentaries on where we have gone wrong to summarise, but with broad agreement on the prominence of the following factors:

- Increasing polarisation, complicating straightforward reporting
- Increasing media uptake of denialist or "contrarian" discourses
- Distrust of traditional journalism and a related rise in social media information sources
- Complexity of the story
- Negativity of the story

Increasing print and broadcast climate coverage crashed headlong into the deregulatory, growth-oriented agenda of 1990s neoliberal politics, well before climate journalism became entangled, as it remains now, in the post-millennium American cultural wars. In the 2000s, the BBC became a lightning rod for its attempts to cover the climate. Its coverage often attracted the ire of a set of right-wing newspaper columnists with close links to the Conservative Party (which has held power in the UK since 2010). According to veteran environmental journalist Geoffrey Lean, responding to being pressured to leave the Telegraph, there were ten columnists in the British press "who reject or underplay the dangers of global warming, with precious few columnar voices on the other side" (Ponsford, 2015). Throughout this period, the BBC was engaged in a power struggle with the Murdoch press, part of a global campaign by Murdoch to extinguish publicly funded media.

In the UK, *false balance* often led to editorial decisions requiring a higher standard of proof for climate science. Such decisions were based on the routine of objectivity as a key journalistic role perception, the interpretation of broadcast regulations as uniformly requiring presentation of two sides of public controversies and were rooted in a journalistic culture of suspicion of environmental campaigning as anti-establishment. One BBC response to conservative pressure was to become the poster child for false balance, occasionally (though never consistently) offering equal time to an energy industry representative or climate change denying Conservative politician when an expert quoting climate change science was interviewed. In 2017, the BBC famously included vocal climate change denier (and former Chancellor under Margaret Thatcher) Nigel Lawson in a morning news programme because prominent climate change communicator Al Gore was interviewed. That led to a rebuke from the UK regulator, OFCOM which, in turn, led to a 2018 memorandum to staff from the Head of News about the dangers of false balance (CarbonBrief, 2018). It included this advice:

> Man-made climate change exists: If the science proves it we should report it. The BBC accepts that the best science on the issue is the IPCC's position … Be aware of 'false balance': As climate change is accepted as happening, you do not need a 'denier' to balance the debate. Although there are those who disagree with the IPCC's position, very few of them now go so far as to deny that climate change is happening. To achieve impartiality, you do not need to include outright deniers of climate change in BBC coverage, in the same way you would not have someone denying that Manchester United won 2-0 last Saturday. The referee has spoken.

In teaching climate change journalism, I've found contemporary UK students are surprised that climate change denial once held such traction; but they find revelatory the government and corporate policies that embody denial of global warming and scientific consensus, but keep below the radar, as politicians and executives proclaim their environmental credentials. In societies where young journalists are likely to have been raised in climate change denialist families, consuming denialist media (the US and Australia are likely examples), teachers might find it useful to provoke students to confront the absurdity of false balance by expanding their range of science reporting. Commentators have suggested many variations on the idea of asking students to report on another field of science and then requiring them to find someone to deny what they find (e.g., why has a student's astronomy piece not sought a denial that Saturn's rings are made of rock and ice?). We hope the students will question

such absurd instructions and carry forward their judgement about the integrity of scientific information to their critical reading and practice of climate change journalism.

The dilution and disruption of effective climate change journalism, which might otherwise have encouraged further and faster policy responses to global warming in the 2010s, was also an effect of "Climategate" in 2009, a disinformation campaign to discredit climate science and sow doubt. It was apparently orchestrated by climate change denial bloggers who hacked into University of East Anglia computers to steal thousands of emails between climate researchers. Sentences were then taken out of context and used by bloggers to construct an image of bad science and conspiracy. The manufactured story spread to the mainstream media, and was especially amplified by right wing media, all in the weeks prior to the crucial Copenhagen Summit. Leiserowitz *et al* (2010) document how, despite several investigations which all concluded there was no deception and no bad science, the "scandal" was highly effective in suppressing US and UK public trust in climate science and leading to yet more artificial balance in reporting.

Particular attention must be paid to the challenge which future climate change journalists face from concerted efforts by the energy industry to limit or alter reporting on global warming by sowing doubt and confusion. For decades, this effort has built, through the investment of hundreds of millions of dollars, a symbiotic relationship with conservative political leaders around the world and with conservative media owners. The following advice to then President George Bush by the long-time Republic Party strategist Frank Luntz twenty years ago signalled the early stages of what would become deeply entrenched US policy: "Should the public come to believe that the scientific issues are settled, their views about global warming will change accordingly. Therefore, you need to continue to make the lack of scientific certainty a primary issue in the debate" (Burkeman, 2003 in Quiggin, 2008). (Luntz now repudiates many of his earlier positions.)

The role of energy money

The investment by energy companies in ensuring public confusion about global warming is of staggering proportions. The process has included many forms of "greenwash" and the funding of front foundations which are deeply integrated with US politics and media, along with sponsored pamphlets, press releases and public lectures, all arguing that global warming is not a problem. Front organisations take the form of conservative think tanks (such as the Cato Institute, Competitive Enterprise Institute, Heritage Foundation, Hoover Institution) and vocal trade associations like the American Petroleum Institute. Many millions of dollars are spent on lobbying and funding the campaigns of politicians friendly to the energy industry. The extraordinary levels of funding for climate disinformation that climate journalism is up against are starkly revealed in a data journalism project of CNBC (2020).

In the last three decades, the five major US oil companies have spent a total of at least $3.6bn on advertisements. An investigation by the Guardian points out that actual investment in clean energy is typically less than 1% of oil company investment – they spend far more on advertising how clean they are (Holden, 2020). Much of the reporting by author and Guardian columnist George Monbiot similarly provides useful examples for journalism educators of watchdog climate journalism holding industry to account in a manner that is too rare in mainstream US journalism.

Hackett *et al* (2017, 3-4) argue that, broadly, climate "coverage is episodic and compartmentalized. It too infrequently connects the dots between, for example, the manifestations of climate change and its causes and consequences, or the rapid exploitation of fossil fuels and global warming". They add that "the overall editorial environment favours economic growth, consumerism and private-sector business. There is little attention to who bears responsibility for climate change, and little critical analysis of capitalism or even the fossil fuel industry".

The leading authority on industry efforts to disrupt and dismiss climate science is Naomi Oreskes of Harvard (see, primarily, Oreskes and Conway, 2011). She found that "available documents show a systematic, quantifiable discrepancy between what Exxon Mobil's scientists and executives discussed about climate change in private and in academic circles, and what it presented to the general public". From as early as the 1970s, "Exxon Mobil (and its predecessors Exxon and Mobil) not only knew about emerging climate science, but also contributed research to it. Scientific reports and articles written by or co-written by Exxon Mobil employees acknowledged that global warming was a real and serious threat", but in subsequent decades the company invested massively in efforts to push policy away from addressing climate change and confuse public opinion. The company's advertorials discussing climate change in The New York Times had a readership in the millions. Oreskes concluded "Exxon Mobil contributed quietly to climate science and loudly to raising doubts about it".

Energy industry campaigns have not only successfully undermined public understanding of the degree of scientific agreement on climate change; they have also increased existing political polarization and limited deeper societal engagement with the issue. Van der Linden *et al* (2017) demonstrate that a promising approach to counter the politicization of science is to make clear to audiences the "high level of normative agreement" (consensus) among experts.

New Zealand climate journalist Jamie Morton suggested that, while some of the damage to mainstream reporting caused by industry lobbying has been overcome, social media presents a new challenge:

> while we don't see climate sceptics (deniers if you call them that) given as much oxygen in the media as was once the case, social media has enabled a troubling environment where bad science and fake news gets shared around and user algorithms can project ill-informed views back at people without challenging them. It bothers me how Facebook, which traditional journalism is competing with, uses the term "newsfeed" as though that's what we're actually getting (thespinoff, 2017)

Climate journalists require training in navigating a complex online political economy which makes climate disinformation highly profitable. The progressive pressure group Avaaz published a study in 2020 about the role of YouTube in promoting climate change denialism. They quote, for example, from a video titled "Climate Change: What Do Scientists Say?" saying "There is no evidence that CO2 emissions are the dominant factor [in climate change]." The video is being promoted by YouTube's algorithm and had 1.9 million views at the time of the Avaaz report. The report was aimed not just at YouTube, but at its many corporate sponsors who continue to profit from publication of such climate disinformation on a massive scale. They argue "Protecting citizens around the world from fake news designed to confuse and poison the debate about climate change must be a key priority for governments, advertisers and social media platforms."

Embedding climate education in the higher education curriculum

Efforts are underway to embed climate change teaching across the higher education curriculum, and journalism teaching needs to be at the forefront of this. Student demand is clear. Students Organising for Sustainability (SOS) is a branch of the UK National Union of Students. The SOS is campaigning in England for a "government-commissioned review into how the whole of the English formal education system is preparing students for the climate emergency and ecological crisis."

Meg Baker of SOS, speaking to an online forum organised by the UK Universities and Colleges Union, demonstrated students' growing concern about climate change. This is well illustrated by surveys conducted by the UK National Union of Students (see figure one). However, she warns educators to help students to avoid debilitating levels of "eco-anxiety" by becoming active agents of positive change.

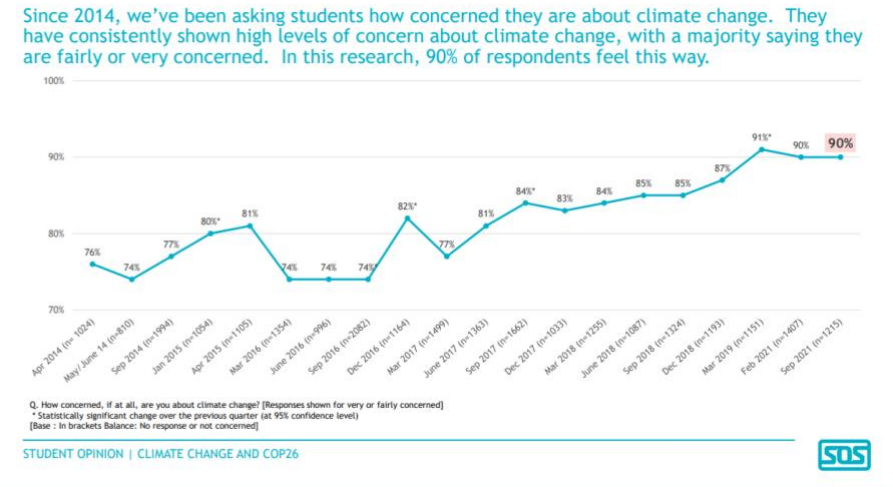

Figure one, from: https://www.sos-uk.org/research

Educators with links to climate change teaching from eighty UK higher education institutions authored a series of reports as the UK Universities Climate Network, seeking to influence policy development at the COP26 summit in Glasgow in 2021. One such report, led from the University of Leeds Priestley International Centre for Climate, addressed "Mainstreaming Climate Change Education in UK Higher Education Institutions". It argued, "if students – and staff – are not learning how their subjects are being changed by the climate crisis, they are not learning the knowledge to equip them for the world in which they already live." The authors suggest this process "is likely to require all degree programmes to integrate climate change into their 'disciplinary' course provision to some extent, even where institution-wide climate change courses are available."

This is a conception of weaving CCE "through all aspects of an institution, going beyond only offering individual degree programmes or specialist courses on climate change, to embedding climate change into structures and curricula across the board, ensuring all students and staff members engage with the issue." This should include "consideration of how climate change is already affecting, and will increasingly impact upon, the industries we work in, the communities we live in, and others around the world."

The key messages of the report were:

• Mainstreaming CCE across all learning and operational activities enables HEIs to better serve their core purpose of preparing learners for their roles in work and wider society, now and in the future.

• Student and employer demand for climate change education is growing, not just in specialist subjects but across all degree pathways.

• The attitudes, mindsets, values and behaviours that graduates need to engage with climate change include the ability to deal with complexity, work collaboratively across sectors and disciplines and address challenging ethical questions.

• The complexity of the climate crisis means all disciplines have a role to play in delivering education for the net-zero transition. Embedding interdisciplinarity is

crucial to ensuring that our response to climate change makes use of all of the expertise HEIs have to offer and promotes knowledge exchange and integration for students and staff.

• Student-centred CCE, including peer-to-peer learning, is a powerful tool for facilitating an inclusive and empowering learning experience, and developing graduates as change agents for the climate and ecological crisis.

• HEIs should develop learning outcomes for CCE that include understanding the scale, urgency, causes, consequences and solutions of climate change; how social norms and practices are driving the climate crisis; and the ability to identify routes to direct involvement in solutions via every discipline.

• Pedagogical approaches to teaching CCE should enable learners to engage with, and respond to, climate change as a “real-world” problem, such as through experiential learning.

When journalism and advocacy merge: space for critical discussion

There is ample evidence of investment in climate reporting by media around the world. But there is also evidence that such reporting remains challenging in some of the countries of the global south where climate change impacts are felt most acutely (e.g. Maweu and Paterson, 2019).

Some of the world's larger climate desks have provided useful overviews of their editorial process, as with Van Syckle's (2021) "Times Insider" essay on their climate reporting and Carrington's (2019) essay about the climate reporting language used at the Guardian. Hertsgaard and Pope (2019), writing in the Columbia Journalism Review, describe a collective project involving more than sixty news organisations "to increase the amount and the visibility of … climate coverage".

In some newsrooms, the challenge of climate reporting has brought to the fore debates about going beyond just reporting, as their institutional response to existential crisis. For the Guardian newspaper in the UK (where it is common for national newspapers to campaign about social issues), the risk was losing major advertisers and being seen as too partisan. Despite that, after much debate, the newspaper embarked on a prominent campaign to "keep it in the ground", pressuring corporations, governments, investment funds and other organisations to divest from and distance themselves from new fossil fuel extraction. The Guardian's internal debates over the role their newspaper should play are chronicled by Forde (2017), but also colourfully described by former managing editor Alan Rusbridger in a 2021 talk, available online (Rusbridger, 2021). As Hackett *et al* (2017, 16) explain, such debates allow students to engage with the question of "what do the contributions of … alternative journalism suggest about the 'wisest' way we might deliver journalism about, and at a time of, climate crisis?"

Climate change in journalism teaching

Climate change journalists are increasingly vocal about their work, and their reflections offer valuable insights and teaching materials to journalism educators. New Zealand online news site The Spinoff, in a 2017 essay tracking the growth of climate journalism in New Zealand, states "Climate change is the biggest story on any editor's newslist right now." The feature is filled with advice from working climate journalists, but this introductory quote from journalist Samantha Hayes stands out as a powerful starting point for engaging students with the challenges:

> Any story that is based on numbers, statistics and graphs is going to be difficult to get your head around and challenging to hook people into. Add to that the fact that the villain is invisible, and you've got a tough task on your hands. Pile on top of that the scale and time frames being talked about – it's a global problem that will occur over centuries – and there is no denying it's a tough sell. So what you need is great talent – science communicators who are charismatic, and can break it down to a simple and punchy message – and good local examples of how this massive, overarching threat will impact your country, city or town or street.

Thew *et al* recommend that "pedagogies such as problem-based, practice-based, enquiry-based, and project-based learning which encompasses the real-life challenges of climate change and puts students at the centre of identifying and evaluating solutions, can help to

facilitate interdisciplinary learning." Climate change is the ultimate "think global, act local" issue: it is through understanding of the global crisis and the interconnections that make local impacts matter to people far distant from them that the advocacy for local (and domestic) solutions gains traction. UNESCO suggests CCE should incorporate "approaches that cultivate integrated knowledge and global citizenship, while preparing students for curious, well-informed, big-hearted lives." (UNESCO 2017, quoted in Thew *et al*, 9).

One journalistic approach to point student environmental journalists to is the humanisation of climate activists. As Paterson (2000), describes, when the climate protester known as Swampy became a celebrity with sympathetic treatment in the media (for a while), protesters were 'normalised' and the trope of portraying them as violent and deranged didn't work anymore; their objectives evolved from disruptive to idealistic and legitimate.

The integration of climate justice with climate journalism needs to include a critical, decolonial stance. By way of example, I ask students to examine some typical messaging from a British charity – the kind that is deployed to influence climate journalists. I want them to understand both the messaging strategy, and its colonial qualities. In a profile titled "Nazma lives in a flood proof village built by ActionAid", we get a personal glimpse of how a particular person in Bangladesh has been helped by a British charity. I suggest students consider Nazma's lack of agency in this campaign.

Hackett *et al* devote a chapter to strategies for improving climate journalism, building on an extensive review of the environmental communication research. They summarise these as:

- prioritize audiences most likely to engage with climate news as an 'issue public' (rather than using a 'one-size-fits-all' approach addressed to a mass audience)
- make greater use of a politically and ethically oriented climate justice frame
- foreground and 'activate' intrinsic, biospheric cultural values which are most strongly correlated with pro-environmental subjectivity
- cultivate social norms of civic engagement and political efficacy with greater attention to the stories, experiences and emotions of people and communities working together to address climate change (2017: 14).

Baird (2021) similarly calls for a focus on "solutions oriented journalism" in teaching students how to report on the environment, and her article for the UK AJE provides a number of examples from her teaching.

Conclusion

We are now at a juncture which will determine if increased climate reporting during the COP26 summit in Glasgow is to become the norm, or if media will revert to business as usual. Journalism educators have compelling reasons to embed climate change in their teaching, and this report has suggested just a fraction of the ample resources available to facilitate this.

In a TEDx talk in 2012, Grist magazine climate writer David Roberts pithily described climate politics as "stuck between the impossible and the unthinkable" (Roberts, 2012). "Your job," he told his audience, "anyone who hears this, for the rest of your life, your job is

to make the impossible possible.” The author of the profile of New Zealand climate journalists cited earlier (thespinoff, 2017) concluded: “That sounds like a pretty good job description to me”.

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[i] Though beyond the scope of this report, those teaching in this area may wish to note the existence of a substantial literature concerning the psychology of climate change denial. A useful overview is Whitmarsh, and Capstick, 2018. Also Armstrong, Krasny, and Schuldt, 2018.

[ii] James Painter produced a book of the same title in 2013 for the Reuters Institute, focussing on journalism. Painter, 2013.

[iii] Vaughan, H. Hollywood's dirtiest secret: The hidden environmental costs of the movies. New York: Columbia University Press, 2019.