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‘Media’

Max Boykoff and Joe Smith

Introduction

The final years of the 2000s have marked a pivotal time regarding the issues of climate change mitigation and adaptation. At the international level, climate negotiations have been leading up to a possible successor treaty of the Kyoto Protocol in Copenhagen Denmark in December 2009. The United States’ (US) role has been shifting significantly, from climate villain to possible climate leader, with the inauguration of Barack Obama . US Secretary of State Hilary Clinton traveled to China in February 2009 to open a dialogue on climate mitigation, thereby seeking to overcome what has become an entrenched North-South impasse (Goldberg 2009). This dialogue – and possible progress from the two greatest contributors to climate change on planet Earth – may take on particular significance if a bilateral partnership can be brokered that can inspire more coordinated and multilateral climate policy action.

Meanwhile, the amount of media coverage of climate change or global warming has plateaued since early 2007. Up to this point, from the late 1980s, the amount of media attention to climate change had undergone a ‘hockey stick’-like increase (see Boykoff 2009). The recent leveling off/downward trend can be attributed to a combination of four main factors: 1) political / economic, 2) ecological / meteorological, 3) scientific, and 4) cultural. As an example of *political / economic* influences, the emergent global economic recession – beginning in 2007 – coincides with the downturn in coverage. Tales of economic woe in the news media may have displaced climate issues from the pages of newspapers and segments in television and radio news broadcasts. In terms of *ecological / meteorological* effects, a high-profile event – potentially linked to changes in the climate – like the 2005 hurricane Katrina in the Gulf of Mexico, was largely absent during this period. Such an absence reduced the number of potential ‘news hooks’ for climate coverage. Regarding *scientific* issues, the growing consensus that humans contribute to climate change has potentially served to diminish the conflict that often drives media reporting (see Boykoff 2007). For instance, clear statements that increases in temperatures are “very likely due to the observed increase in anthropogenic greenhouse gas concentrations” (IPCC 2007: 1) have become accepted as a mainstream position and hence are now less likely to be seen by journalists as ‘news’. What is sometimes referred to as ‘the IPCC consensus’ on climate change has been widely accepted in newsrooms, but at the same time this acceptance has reduced the news value that can be derived from more conflict-ridden stories. Finally, in terms of *cultural* elements, it may be that the content of stories has less frequently become explicitly ‘global warming’ or ‘climate change’ science articles; instead, these may have become ‘carbon trading’, ‘energy’, ‘energy independence’ or ‘sustainability’ stories. (for more on this, see chapters by Karin Backstrand and Ray Loi in this volume). Moreover, climate change was not a salient election campaign issue in the US Presidential race and many journalists were awaiting the installation of the new Administration to see what climate policy actions would be undertaken.

Such stagnation in coverage may be interpreted by climate change policy negotiators and leaders as reflecting a more general decline in public support for negotiations and institution building related to climate governance . However, connections between media information and

potential behavioral change are far from straightforward. Coverage certainly does not determine engagement or behavioral change. Rather, it shapes possibilities. Nonetheless, media representations – from news to entertainment media – provide critical links between climate science, policy and the broadly-construed public. Media translations frame aspects of climate change – such as questions of attribution – for policy, politics and the public, and draw attention to salient actors negotiating the spaces of climate governance. These communications unfold within a larger political context that feeds back into ongoing media coverage and public perceptions.

In this essay, we explore the dynamic role of mass media in covering anthropogenic climate change. We provide an overview of contexts that shape media portrayals through time, and then briefly explore various processes that shape the production of ‘news’. We then survey the dissemination and interpretation of environmental news once it enters the public sphere. Overall, in this essay we wish to help make sense of how media depictions shape understanding of anthropogenic climate change, while touching on how larger political contexts influence such framing processes. Throughout, we take the position that ‘truth’ is not simply translated or reflected. Instead, mass media processes – at multiple scales – significantly shape how actors, issues, events, pronouncements and information are perceived. Therefore, it is worth considering how media representations contribute to perceived possibilities for present and future actions.

Mass Media Portrayals of Climate Change

A range of books, essays, media reports and texts produced over the second half of the last century created the background within which the contemporary climate challenge is situated. Aldo Leopold’s *Sand County Almanac* prompted many to consider environmental stewardship through his discussion of the ‘land ethic’ (1949). Rachel Carson’s book *Silent Spring* raised public awareness of the environmental risk from pesticide exposure, and examined how chemical industry interests hindered environmental policy action (1962). Such questions were increasingly taken up through academic research on interactions between science, media and governance. Prominently, Burgess and Gold assembled an edited volume examining intersections between media and culture across many environmental issues (1985) and Nelkin wrote an influential book on reasons behind the increase of media coverage of science and technology (1987). A great deal of research has followed from these pioneering projects (see Boykoff 2009 for more), with a particular focus on the high-stakes, high-profile and highly-politicized issue of climate change.

General media representations of climate change emerged as early as the 1930s. For example, in 1932, *New York Times* staff wrote, “The earth must be inevitably changing its aspect and its climate. How the change is slowly taking place and what the result will be has been considered...” (*New York Times* 1932: 4). The ‘detection and attribution story’ of anthropogenic climate change began to appear a few decades later. For instance, in 1950 the *Saturday Evening Post* published a story exploring connections between farming practices and atmospheric temperature change (Abarbanel and McClusky 1950). In 1956, Waldemar Kaempffert wrote a piece in the *New York Times* with the lead, “Today more carbon dioxide is being generated by man’s [sic] technological processes than by volcanoes, geysers and hot springs” (1956: 191). These news reports ran in parallel with the emergence of the first expert-led global analyses of environmental processes, such as the 1957 International Geophysical Year and a 1965 US National Academy of Sciences-sponsored conference ‘The Causes of Climate Change’ (Fleming 1998; Weart 2003).

By various metrics of social research, both qualitative and quantitative, there is widespread public acknowledgement of, and concern about, climate change (e.g. Lorenzoni and Pidgeon 2006). International agreements on the issue, above all the United Nations Framework Convention on Climate Change and the Kyoto Protocol that followed have cemented the issue in annual rounds of mainstream international policy work and political negotiation that are paralleled at regional and local levels and within business discourses. These shifts in academic, public and political discourses have not, however, settled popular opinion into a majority support for decisive action. Alongside the stated awareness and concern, research into public attitudes also uncovers feelings of ambiguity, confusion, and suspicion of government and business (see Steven Brechin's chapter on public opinion in this volume). The following section picks apart some of the features of climate change that make it difficult to translate into the public realm, and the penultimate section explores how aspects of media culture and practice exacerbate these difficulties.

Multi-Scale Influences

Interactions between media and environmental politics are dynamic, and often messy. It is clear that climate science and politics shape media reporting; however, it is also the case that journalism shapes ongoing science, governance, policy decisions and activities. Mass media coverage of climate change has served to 'frame' environmental issues for policy actors and the public. Meanwhile, various actors – from individual authority figures and experts to collective political action coalitions and consortia – seek to access and utilize mass media sources in order to shape perceptions of environmental issues contingent on their perspectives and interests.

These 'framings' are inherent to cognition, and effectively contextualize as well as 'fix' interpretive categories in order to help explain and describe complex environmental processes (e.g. Robbins 2001). Moreover, these 'frames' serve to assemble and privilege certain interpretations and understandings over others (Goffman 1974; Entman 1993). Through journalistic norms and values, certain events become news stories (Tuchman 1978; Iyengar and Kinder 1987). Various influences also feed back into these social relationships and further maintain and/or contest frames of 'news', knowledge and discourse. Inevitably, these processes play a role in setting agendas for climate governance.

Furthermore, media professionals carry out their work within a challenging political, economic, institutional, social and cultural landscape (Starr 2004). For instance, large-scale social, political and economic factors influence everyday individual journalistic decisions, such as how to focus or frame a story with limited time to press as well as finite numbers of 'column inches' (physical space for news stories). These issues intersect with processes such as journalistic norms and values (including 'fairness', and 'accuracy'), to further shape news content (Jasanoff 1996). Much as storylines are fueled by those parties engaged explicitly in climate science and politics, the mass media play an important role in shaping this discourse as an interpreter, translator and disseminator of information (Boykoff 2007).

One of the most prominent challenges facing media coverage of climate change is how to fairly and accurately represent uncertainty. Uncertainty here takes on multiple characteristics, as described by Brian Wynne's four-part taxonomy (Wynne 1992): *risk* (knowing the odds), *uncertainty* (don't know odds but know the parameters), *ignorance* (unknown unknowns), and *indeterminacy* (causal chains are open, thus defying prediction). Sub-dividing considerations of uncertainty in this way can help to distinguish between related yet distinct issues, from the

uncertainty-as-ignorance inherent in any scientific undertaking, to its broad usage as indeterminacy as a tactic marshaled by intransigent policy actors, to lessen concern for climate change. Generally speaking, scientists often have difficulty placing the uncertainty associated with their research into a familiar context, through an appropriate analogy or metaphor. While scientific uncertainty has entered debates regarding action (Zehr 2000), sometimes serving to inspire inaction (Demeritt 2001), it is an element central to all scientific inquiry. Freudenburg et al have examined the deliberate conflation and deployment of various aspects of uncertainty through their investigations of ‘scientific certainty’ argumentation methods (SCAMs) that cast doubt on both the science of climate change, and the mitigation and adaptation policy proposals put forward (2008).

There are hazards for the non-specialist journalist or editor in considering ‘the climate beat’. There are facets of climate change where agreement is strong and convergent agreement dominates, while in others contentious disagreement garners worthwhile debate and discussion (Boykoff 2008). Examples of the former are issues such as ‘humans have played a role in climate change since the industrial revolution’. Examples of the latter are themes such as ‘Voluntary Carbon Offsets are tools that help achieve significant and additional greenhouse gas emissions reductions’. Distinct issues in climate science and policy necessitate textured and nuanced treatments in mass media in order to achieve fair, accurate and precise portrayals. However, the tendency to fuse this complex bundle of science, policy and politics into a climate gestalt summarized variously as ‘the climate change debate’ or ‘climate consensus’ has negative consequences for the quality of reporting and, in turn, public understanding and debate. Challenges in translating climate science – with the attribution and uncertainty therein – to the public via mass media can also be partly explained by the differing norms of knowledge production. While an ideal common to both science and media communities is to improve on the relevant corpus of knowledge, the expressions of this aim are divergent. The peer-review process in science drives *how* (and what) assertions, results and conclusions reach print. Subject to multiple stages of reviews by expert peers and editors, this process assesses the quality of the arguments, analyses and findings in a negotiated space, typically before a given article finds its way into print. This does not remove conflict from print, but rather is a series of safeguards from untested, out-of-context and inaccurate entries into the ongoing and unfolding scientific discourse. While imperfect, this process endeavours to impose standards upon contributions to the ongoing production of scientific knowledge. In journalism, while reporters and editors negotiate in the pre-print stage, professionalised journalistic norms and standards instead *propel* conflict into print (see Boykoff and Boykoff 2007 for more). This does not mean to suggest that potential contributions are scrutinised any less by experts in the field of journalism. Rather, through distinct norms, these communities therefore express claims differently: one case emphasizes convergence, and the other focuses on contention. Overall, these varied mobilisations contribute to continued challenges in media coverage of the convergent scientific view that humans contribute to climate change, and therefore, social recognition of anthropogenic climate change. Although media performance is uneven globally (Painter 2007) it remains the case that media treatments of climate change frequently result in illusory, misleading and counterproductive debates amongst publics and within and between policy communities. We now turn to summarise some of those repertoires and consider what revisions in media culture and practice or in science and policy community activities might aid the situation.

Climate change as a news story

Once news texts or segments are produced and disseminated into the public sphere, these encoded messages – television and radio broadcasts, printed newspapers and magazines, and internet communications – then compete in public arenas for attention (Hilgartner and Bosk 1988). However, it is precisely this competition that explains much of the career of the topic in the media. All media, including public service broadcasters, are competitive. Editors compete with other programmes and publications for audience/readership share. Journalists compete with each other to win space for their stories, and to win the best slots on a programme or in a paper.

An issue that is long running, uncertain and run-through with complex debates over detailed and sophisticated scientific and economic concepts and uncertainties does not easily translate into journalism's central product: the 'story'. All of the demanding features of climate change as an issue have to be translated into stories in order to win media space. Even where an editor or channel controller is aware of audience or readership interest in the issue, they remain ever wary of 'boring' their publics. Without being able to assume too much about existing audience/reader knowledge, short summaries of basic information also have to be woven in. Hence the few hundred word news article or two minute broadcast item has to generate elements of conflict, event and personality into processes that are born in the research seminar and detailed international negotiation (Brown and McDonald 2000; Harrabin 2000).

This results in coverage that can hinder public understanding or engagement as much as help it. Hence from the early 1990s until the mid 2000s many news outlets presented climate change science as an evenly balanced debate between apparently expert groups who were 'believers' or 'deniers'. The informational bias of this reporting has been well demonstrated (e.g. Oreskes 2004; Boykoff and Boykoff 2004) and its origins in media culture and practice diagnosed (Andreadis and Smith 2007; Smith 2008).

The confined spaces of news media offer few opportunities to consider large-scale shifts in political economy that might deliver a transition to low carbon economies. This has been made more difficult by the fact that reporting has tended to bundle climate science, policy and politics into a singular climate 'gestalt'. Mainstream politics has, in almost all the most powerful countries in the UN system, absorbed the potential hazards of climate change and acknowledges the need for mitigation globally. Yet mainstream politicians insist that they have little political space for maneuver. For instance, the electorate's rejection of the Canadian Liberal Party's proposition of a bold environmental tax reform package in 2008 has only reinforced this feeling further. More than that, in 2008 the UK Energy and Climate Change Minister Ed Miliband called in advance of UN -sponsored talks in Copenhagen for a 'popular mobilisation' that could underpin political action (Adam and Jowitt 2008).

Thus climate change – in addition to being a complex, long running and boundary crossing 'issue' – comes bundled with half-submerged ethical and political dimensions. These generate a set of challenges to the practices of heterogeneous media workers and organisations, covering the many dimensions of climate change science and governance issues. While the self-identity of newsroom culture loudly proclaims its commitment to impartiality based in scientific evidence, the economic, political and social considerations and ethical concerns for the interests of future generations and the natural world open up a much wider and more complex discursive terrain.

The media's role in enabling rounded public deliberation is, if anything, more important in this next phase of human society's engagement with climate change. However there is

editorial resistance to being enrolled in a hidden political agenda. Yet this ignores the fact that the western media already display almost universally embedded values concerning democracy and human rights. One way of coping with this is to emphasise that action is not justified on the basis of certainty, ‘consensus’ and ‘finished’ science, but rather on the basis of risk analysis on the grand scale. This re-frames narratives in such a way that telling stories about climate change becomes a matter of allowing society to interpret and respond to major, albeit largely future, risks.

Conclusions

Endeavours to re-frame climate change science and governance through mass media face their own set of ‘risks’. At best, media reporting helps address, analyse and discuss the issues, *but not answer them*. An overarching and critical point here is that media coverage needs to work to more effectively portray the contours of the varied aspects of climate change – from the human role in it, to whether it is ‘serious’. Through time, many factors have shaped how mass media workers represent various aspects of climate change. These features have, in turn, influenced ongoing considerations as well as challenges in climate governance and policy action. In this essay, we have sought to demonstrate that media representations of climate change are not simply random assemblages of articles, segments and spots; rather, they are manifestations of dynamic and contested relationships between scientists, policy actors and the public.

Through all of this, media portrayals are significant aspects of ongoing considerations of climate governance. The way that these issues are covered in news media can have far-reaching consequences in terms of ongoing climate scientific inquiry as well as policy maker and public perceptions, understanding and potential engagement. These factors all contribute to the perceived range of possibilities for action. For adequate mediations of both the science and the policy/political dimensions of the issue, ongoing purposeful work will be required. There are practical shifts needed, such as improving journalists’ ecological literacy and expanding the pool of media sources that are intellectually and practically equipped to help tell these stories as they spill out beyond the science. To assist in this endeavour, storytelling needs to represent the cross-cutting nature of the issue. These more textured and expansive narratives must account for both adaptation and mitigation, to more effectively break these very substantial subjects down into their constituent yet interacting parts. Furthermore, the range of voices around the issue needs to be expanded in order to ensure a greater diversity of perspectives and opinions culturally as well as geographically. Without these changes in media representations of climate change, it is difficult to imagine prudent but purposeful responses. This conclusion does not suggest that the task of seeking better media representation of climate change rests solely with the media. Rather, these are part of the challenges of recasting the relationships between and within the realms of science, policy and civil society.

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