

Science (and Policy) Friction: How Mass Media Shape US American Climate Discourses

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Abstract

In the context of the US approach to climate science and policy, this chapter explores the cultural politics embedded in the processes of how the mass media shapes climate change discourses. These cultural politics are explored through a critical discussion of the claims-makers that get media ‘air time’, the power-laden storytelling of media reporting, a potted history of US reporting on climate change and, finally, a newer form of climate storytelling through public opinion polling. The chapter argues, amongst other things, that mass media reporting and discussions of climate change and climate change science work to inform— paradoxically at various times and places—but also obfuscate and complicate climate science policy and its associated cultural politics. Overall, we suggest that in the US, media reporting on climate change—which must be fully contextualised in the macro and micro power relations that co-create and inform it—has helped address, analyse and discuss climate-related issues but has not and cannot answer them.

1 Introduction

“For the sake of our children and our future,
we must do more to combat climate change.”

—US PRESIDENT BARACK OBAMA, *State of the Union Address, February 12, 2013.*

In his 2013 “State of the Union” (SOTU) address, United States (US) President Barack Obama used strong rhetoric on climate change. And media outlets—spurred on by key pundits, journalists and editors—took note. To give some examples, Darren Goode at *Politico* wrote that Obama’s statements were “strong enough call(s) to action to appease most climate advocates, even those who had said in the days leading up to the speech that they wanted Obama to

lay out a detailed plan of attack”.¹ Stephen Stromberg from *The Washington Post* commented, “President Obama began his State of the Union address Tuesday night by threatening Congress. And, on global warming, that’s a good thing”.² As Obama began his second term in the most powerful office on planet Earth, by way of media reactions to the speech, an onlooking public citizenry saw ‘hope’ rise again for more comprehensive climate change engagement from the US.

Indeed, all of this stands in stark contrast to President Obama’s previous SOTU addresses, in which he rarely uttered the word “climate change”. This discursive absence from previous speeches was far from trivial, and has numerous implications: by not confronting climate issues explicitly, it was argued that opportunities for further scientific research and policy action were severely limited.³ The discursive silence from the Obama Administration on climate change was thought to also have put a damper on international climate negotiations as well as on science–policy cooperation in the context of this high-stakes 21st century issue. Yet there remain many open questions regarding how President Obama may or may not square this new rhetoric with ongoing policy deliberations regarding symbolically and materially critical climate-related issues in his second term, such as offshore drilling, a tax on carbon emissions, subsidisation of carbon-based fuel extraction, and decision-making on oil and gas leases for hydraulic fracturing (or “fracking”). Put into (popular) cultural context through the words of musician Ben Harper in the song ‘Ground on Down’ from his 1995 album *Fight for your Mind*, “there are good deeds and there are good intentions. They’re as far apart as heaven and hell”.

As evidenced by Obama’s back and forth on climate policy, over the past decades, the dynamics of US American science and politics have clearly shaped media coverage of climate change. Yet it is also worth noting and considering how media representations have shaped ongoing scientific and political considerations, decisions and activities. In other words, it is instructive to consider how mass media have influenced who has a say and how in the public

1 Goode, Darren, “Obama’s State of the Union Climate Call May Buy Time for EPA,” published by *Politico*, February 12, 2013, accessed December 14, 2013. <http://www.politico.com/story/2013/02/obamas-state-of-the-union-climate-call-may-buy-time-for-epa-87567.html>.

2 Stromberg, Stephen, “In State of the Union, Obama Threatens Congress on Climate Change,” *The Washington Post*, February 13, 2013, accessed December 14, 2013. <http://www.washingtonpost.com/blogs/post-partisan/wp/2013/02/13/obama-state-of-the-union-climate-change-sotu/>.

3 Boykoff, Maxwell, “A Dangerous Shift in Obama’s Climate Change Rhetoric,” *Washington Post*, January 29, 2012, accessed December 14, 2013. <http://wapo.st/zf2GLo>.

arena. By exploring some of the key processes involved in these interactions—in the context of North American science, policy and public arenas—we seek to contribute to wider considerations in this volume.

The media in the US (and around the world) are constituted by many institutions, processes and practices that together serve as ‘mediating’ forces between communities such as science, policy and civil society. Media segments, articles, clips and opinion pieces represent critical links between people’s everyday realities and experiences, and the ways in which these are discussed at a distance between science, policy and public actors.⁴ People throughout society rely upon media representations to help interpret and make sense of the many complexities relating to climate science and governance. Furthermore, media messages are critical inputs to what forms public discourse on current climate challenges.

These spaces are what we now refer to as the “cultural politics of climate change”: dynamic and contested spaces where various ‘actors’ battle to shape public understanding and engagement.⁵ These are places where formal climate science, policy and politics operate at multiple scales, and are dynamic as well as contested processes that shape how meaning is constructed and negotiated and taken up. In these spaces of the ‘everyday’, cultural politics involve not only the discourses that gain traction in wider discourses, but also those that are absent.⁶ Again, as evidenced by the Obama SOTU example that begins this chapter, considering climate politics this way helps to examine “how social and political framings are woven into both the formulation of scientific explanations of environmental problems, and the solutions proposed to reduce them”⁷ and the ‘truth regimes’ that construct these framings and solutions.

4 Starr, Paul, *The Creation of the Media: Political Origins of Modern Communications* (New York, NY: Basic Books, 2004).

5 E.g. Boykoff, Maxwell, and Michael K. Goodman, “Conspicuous Redemption? Reflections on the Promises and Perils of the ‘Celebrization’ of Climate Change,” *Geoforum* 40 (2009): 395–406.

6 Derrida, Jacques, “Structure, Sign, and Play in the Discourse of the Human Sciences,” in *Writing and Difference*, ed. Jacques Derrida (Chicago: University of Chicago Press, 197), 278–293.

7 Forsyth, Timothy, *Critical Political Ecology: The Politics of Environmental Science* (London: Routledge, 2003), 1.

2 Of Fossils & Freedom: Influential Claims-makers in the Public Arena

The cultural politics of climate change reside in a diversity of spaces and places, from workplaces to pubs and kitchen tables. Actors on this stage range from fellow citizens to climate scientists as well as business industry interests and activists of environmental NGOs (ENGOS). Over time, individuals, collectives, organisations, coalitions and interest groups have sought to access the power of mass media to influence the architectures and processes of climate science, governance and public understanding through various media ‘frames’ and ‘claims’.

Questions regarding “who speaks for the climate” involve considerations of how various perspectives—from climate scientists to business industry interest and ENGO activists—influence public discussions on climate change.⁸ ‘Actors’, ‘agents’, or ‘operatives’ in this theatre are ultimately all members of a collective public citizenry. However, differential access to media outlets is a product of differences in power, and power saturates social, political, economic and institutional conditions undergirding mass media content production.⁹

In the highly contested US American milieu of climate science and governance, different actors have sought to access and utilise mass media sources in order to shape perceptions on various climate issues parallel to their perspectives and interests.¹⁰ For example, ‘contrarians’, ‘skeptics’, or ‘denialists’ have had significant discursive traction in the US public arena over time,¹¹ particularly by way of media representations.¹² In particular, resistances both to diagnoses of the causes of climate change and to prognoses for international climate policy implementation have been often associated with the political right: the Republican Party and more particularly a right-wing faction called the “Tea Party”.¹³ John Broder of *The New York Times* described this right-of-

8 Boykoff, Maxwell, *Who Speaks for Climate? Making Sense of Mass Media Reporting on Climate Change* (Cambridge: Cambridge University Press, 2011).

9 Wynne, Brian, “Elephants in the Rooms Where Publics Encounter ‘Science’?” *Public Understanding of Science* 17 (2008): 21–33.

10 Nisbet, Matthew C., and Chris Mooney, “Framing Science,” *Science* 316 (2007): 56.

11 Leiserowitz et al., “Climategate, Public Opinion and Loss of Trust,” *American Behavioral Scientist* 57.6 (2013): 818–837. doi:10.1177/0002764212458272.

12 Boykoff, Maxwell, “Public Enemy No.1? Understanding Media Representations of Outlier Views on Climate Change,” *American Behavioral Scientist* 57.6 (2013): 796–817. doi:10.1177/0002764213476846.

13 Dunlap, Riley E., “Climate-Change Views: Republican-Democrat Gaps Extend,” *Gallup*, May 29, 2008.

centre US political party stance as an “article of faith”, and polling data have shown that “more than half of Tea Party supporters said that global warming would have no serious effect at any time in the future, while only 15 percent of other Americans share that view”.¹⁴

The conservative vanguard that won and retained a Republican majority in the House of Representatives in the past two national election cycles of 2010 and 2012 has been comprised of many actors who have taken a sceptical stance on the connection between greenhouse gas emissions and climate change. Journalist Ronald Brownstein commented in the *National Journal* that many “have declared the science either inconclusive or dead wrong, often in vitriolic terms”.¹⁵ Moreover, despite the fact that carbon-based industry interests have exerted considerable influence over climate policy in the United States, associated scientists and policy actors who have questioned the significance of human contributions—often dubbed ‘climate contrarians’—have been primarily housed in US universities, think tanks and lobbying organisations.¹⁶

Non-nation state organisations such as the Heartland Institute have held numerous meetings to promote contrarian views on climate science and policy.¹⁷ In short, issues associated with ‘what is’ and ‘what to do’ about climate change have been a politically divisive issue in the US and North American more broadly. Through a number of intersecting norms and trends in US media outlets (to be described further below), media representations have contributed significantly to the perception of the North American political sphere as a highly polarised one when taking up climate issues.

14 Broder, John M., “Skepticism on Climate Change is Article of Faith for Tea Party,” *The New York Times*, October 21, 2010, A1.

15 Brownstein, Ronald, “GOP’s New Senate Class Could Be Conservative Vanguard,” *National Journal*, September 25, 2010.

16 Dunlap, Riley E., “Climate Change Skepticism and Denial: An Introduction,” *American Behavioral Scientist* 57.6 (2013): 655–659. doi: 10.1177/0002764213477097; McCright, Aaron M., “Dealing with Climate Contrarians,” in *Creating a Climate for Change: Communicating Climate Change and Facilitating Social Change*, ed. Susanne C. Moser and Lisa Dilling (Cambridge: Cambridge University Press, 2007), 200–212.

17 Goodman, M., and J. Littler, “Celebrity Ecologies: Introduction,” *Celebrity Studies* 4.3 (2013): 269–275; Boykoff, Maxwell, and Shawn Olson, “‘Wise Contrarians’ in Contemporary Climate Science-Policy-Public Interactions,” *Celebrity Studies* 4.3 (2013): 276–291; Hoffman, A.J., “Talking Past Each Other: Cultural Framing of Skeptical and Convinced Logics in the Climate Change Debate,” *Organization and Environment* 24.1 (2011): 3–33.

3 Contributions to Climate Storytelling

The complex and multi-faceted issue of climate change is an issue that cuts to the heart of humans' relationship with the environment. The cultural politics of climate change are situated, power-laden, media-fed and recursive in an ongoing battlefield of knowledge and interpretation.¹⁸ Mass media link these varied spaces together, as powerful and important interpreters of climate science and policy, translating what can often be alienating, jargon-laden information for the public citizenry, broadly construed. Media workers and institutions powerfully shape and negotiate meaning, influencing how citizens make sense of and value the world.

In the high-profile US context, journalists, producers and editors as well as scientists, policymakers and non-nation state actors must scrupulously and intently negotiate how climate is considered as a 'problem' or a 'threat'. As part of this process, it has been demonstrated that media reports have often conflated the vast and varied terrain—from climate science to governance, from consensus to debate—as unified and universalised issues.¹⁹ As a consequence, conflated representations can confuse rather than clarify: they can contribute to ongoing illusory, misleading and counterproductive debates within the public and policy communities on critical dimensions of the climate issue. To the extent that US mass media fuse distinct facets into climate gestalt—by way of 'claims' as well as 'claims makers'—collective public discourses, as well as deliberations over alternatives for climate action, have been poorly served.

There are facets of climate science and policy where agreement has become strong and convergent agreement dominates. In other areas, meanwhile, contentious disagreement has garnered worthwhile debate and discussion. As an example of strong agreement among relevant expert communities, research over the past decades has consistently provided evidence that humans contribute to 20th and 21st century climate change. As an example of an area of ongoing (and contentious disagreement), research on the connections between anthropogenic climate change and the frequency of extreme events (e.g. hurricane landfalls in the US Gulf Coast, tornadoes in the US Midwest) remains a place of ongoing debate. However, the conflation of these diverse dimensions into one sweeping issue through media representations has con-

18 Boykoff, Maxwell, Ian Curtis, and Michael K. Goodman, "Cultural Politics of Climate Change: Interactions in Everyday Spaces," in *The Politics of Climate Change: A Survey*, ed. Maxwell Boykoff (London: Routledge/Europa, 2009), 136–154.

19 Boykoff, *Who Speaks for Climate?*

tributed to confusion. Moreover, this has created a breeding ground for manipulation from outlier viewpoints to inadvertently or deliberately skew public discourse and added to further confusion in the public realm.

Regarding 'claims makers', efforts to make sense of complex climate science and governance through media representations involve decisions regarding the 'experts' or 'authorities' who speak for climate. This is particularly challenging when covering climate change, where indicators of a climatic change may be difficult for most people to detect.²⁰ Moreover, in the advent and increasingly widespread influence of new and social media (along with fewer 'gatekeepers' of content generation), the identification of 'expertise' can be more, rather than less, challenging. The abilities to quickly conduct a Google search for information is in one sense very liberating; yet, in another sense, this unfiltered access to complex information also intensifies possibilities of short-circuiting peer review processes (and determinations by 'experts'), and can thereby do an "end-run around established scientific norms."²¹ In other words, these developments have numerous and often paradoxical reverberations through ongoing and contentious US public discourses on climate change.

Media conflation of claims and claims makers has been wrapped up in inherent and general challenges of translation. Within language resides the power to effectively (mis)communicate. However, differences in language use between science, policy, media and civil society can unavoidably impede efforts to make climate change—or any other issue—meaningful. In this way, important research, effective arguments, and interesting insights can suffocate under a wet blanket of jargon. Andrew Weaver has noted, "For the average person, the scientific jargon emanating from [scientists'] mouths translates into gobbledygook."²² Considered in this way, responsibilities for media conflation cannot be placed on journalists, producers and editors themselves. Instead, these can be partly attributed to long-standing differences between The Two Cultures—sciences and humanities—first explained by C.P. Snow in the 1950s,²³ and further elaborated in recent years in the context of climate science

20 Andreadis, Eleni, and Joseph Smith, "Beyond the Ozone Layer," *British Journalism Review* 18.1 (2007): 50–56.

21 McCright, Aaron M., and Riley E. Dunlap, "Defeating Kyoto: The Conservative Movement's Impact on U.S. Climate Change Policy," *Social Problems* 50.3 (2003): 359.

22 Weaver, Andrew, *Keeping Our Cool* (Toronto, Ontario: Viking Canada, 2008), 29.

23 Snow, Charles Percy, *The Two Cultures* (Cambridge: Cambridge University Press, 1959).

policy by scholars such as Mike Hulme²⁴ as well as Matthew Nisbet and colleagues.²⁵

While media interventions seek to enhance understanding of complex and dynamic human–environment interactions, vague and decontextualised reporting instead can enhance bewilderment. For example, by collapsing distinctions between evidence-based science and policy opinions, and by overlooking places where there is convergent agreement or divergent views within expert communities, public understanding has suffered in the US.²⁶ This can be resolved in part by placing climate science and policy issues effectively *in context*. Context helps sort out marginalised views from counter-claims worthy of consideration on various aspects of climate change. Without providing such context, it becomes more (rather than less) challenging for citizens and policy actors to make sense of these issues, influencing their everyday lives and livelihoods.

There are many reasons why US American media accounts have failed to provide greater nuance in these aspects of climate change. Among them, processes behind the building and challenging of dominant discourses take place simultaneously at multiple scales.²⁷ Moreover, media representations are derived through dynamic and non-linear relationships between scientists, policy actors and the public that is often mediated by journalists' news stories.²⁸ In these relationships, multi-scalar processes of power shape how mass media depict climate change. Processes involve an inevitable series of choices to cover certain events within a larger current of dynamic activities, and provide mechanisms for privileging certain interpretations and 'ways of knowing' over others. The resulting images, texts and stories compete for attention and thus permeate interactions between science, policy, media and the public in varied ways. Furthermore, these interactions spill back onto ongoing media representations. Through these selection and feedback processes, mass media have given voice to climate itself by articulating aspects of the phenomenon in particular ways, via claims makers or authorised speakers. In other words, through the web of contextual and dynamic factors, the stream of events in our shared

24 Hulme, Mike, "Geographical Work at the Boundaries of Climate Change," *Transactions of the Institute of British Geographers* 33.1 (2008): 5–11.

25 Nisbet, Matthew C. et al., "Four Cultures: New Synergies for Engaging Society on Climate Change," *Frontiers in Ecology and the Environment* 8.6 (2010): 329–331.

26 Boykoff, "Public Enemy No.1?"; Leiserowitz, "Climategate."

27 Boykoff, M., and T. Yulsman, "Political Economy, Media and Climate Change—the Sinews of Modern Life," *Wiley Interdisciplinary Reviews: Climate Change* 4.5 (2013): 359–371.

28 Carvalho, Anabela, and Jacquelin Burgess, "Cultural Circuits of Climate Change in UK Broadsheet Newspapers, 1985–2003," *Risk Analysis* 25.6 (2005): 1457–1469.

lives gets converted into finite news stories. Thus, constructions of meaning and discourse on climate change are derived through combined structural and agential components that are represented through mass media to the general public.

4 The Growth of US American Media Coverage of Climate Change

While the critical issue of 'climate change' emerged significantly in the North American public arena in the late 1980s, the roots of media treatment of climate change run much deeper. The sprouts of climate coverage have surfaced alongside the birth and growth of modern media communications over the past century. Through the propagation of information via numerous channels and outlets, circulation and readership of various media publications in North America flourished.²⁹ Along with these developments came idealised journalistic standards of accuracy, accountability, independence, balance and checks on profit.³⁰

However, corporate concentration, conglomeration and commercialisation of mass media in the early twentieth century carried conflicting impulses of expanding democratic speech and corporate capitalist pursuits of profit.³¹ Many mass media organs transformed into large-scale commercialised news apparatuses, and power of mass media became both amplified and more entrenched in society.³²

Over this period of time, mass media coverage shifted from attention paid predominantly to weather, food and climate to the addition of numerous articles that sought to describe the significance of this scientific research for society. While still scant, relative to the quantity of contemporary coverage of climate change, the spheres of climate science and mass media further came together in the 1930s.

In the subsequent three decades, US media coverage of climate change remained sparse, where climate science reports and meetings in the 1960s and 1970s, such as the conference "Causes of Climate Change" hosted by the

29 Starr, *The Creation of the Media*.

30 Jones, Alex S., *Losing the News: The Future of the News that Feeds Democracy* (Oxford, UK: Oxford University Press, 2009).

31 Graber, Doris, *Media Power in Politics* (Washington, D.C.: CQ Press, 2000); Doyle, Gillian, *Media Ownership: The Economics and Politics of Convergence and Concentration in the UK and European Media* (London, UK: Sage Publications, 2002).

32 McChesney, Robert W., *Rich Media, Poor Democracy: Communication Politics in Dubious Times* (Chicago: University of Illinois Press, 1999).

National Center for Atmospheric Research (NCAR) in 1965, only generated occasional pieces. Yet events over this time period (such as the first Earth Day in 1970) prompted ongoing considerations of interactions as the human–environment interface, while the global oil shocks in the 1970s began to draw attention to questions of energy security and the environment. During this time, scientific conferences exploring climate themes also increased. Bookending this decade, a 1971 conference entitled *Study of Man's Impact on Climate* was held at Stockholm, and in 1979 the World Meteorological Organisation (WMO) organised the first World Climate Conference in Geneva, Switzerland.³³

The early 1980s began to see more sustained coverage of climate science, focusing mainly on prominent and charismatic scientists such as the National Aeronautics and Space Administration's (NASA) James Hansen and then-NCAR's Stephen Schneider. For example, a front-page story at *The New York Times* in 1981 featured Hansen's *Science* study showing an increase in global mean temperatures along with a concurrent increase in atmospheric CO₂ emissions.³⁴ Furthermore, in 1985, the Villach Conference convened in Austria to examine impacts of greenhouse gas emissions on the planet. Concurrently, academic research began to interrogate how media representations have fed back into on-going formulations and considerations of environmental problems, issues and themes.³⁵

But it was in 1988 when climate science and governance flowed into full public view—by way of these numerous historical tributaries—through large-scale media attention.³⁶ Media coverage of climate change and global warming increased substantially in Western Europe and North America.³⁷ Many factors contributed to this rise, and these can be further understood through the primary type or effect of each contribution.

First, there were ecological/meteorological events in the form of a North American heat wave and drought in the summer of 1988, as well as attention-grabbing forest fires in parts of Yellowstone National Park. These concomitant events were thought to sensitise many in the climate science and policy communities, as well as the media and public, to the issue of climate change. As

33 Fleming, James Roger, *Historical Perspectives on Climate Change* (Oxford, UK: Oxford University Press, 1998).

34 Mazur, Allan, and Jinling Lee, "Sounding the Global Alarm: Environmental Issues in the US National News," *Social Studies of Science* 23.4 (1993): 681–720.

35 Weart, S., *The Discovery of Global Warming* (Cambridge, MA: Harvard University Press, 2003).

36 Carvalho, and Burgess, "Cultural Circuits of Climate Change."

37 Weingart, Peter, Anita Engels, and Petra Pansesgrau, "Risks of Communication: Discourses on Climate Change in Science, Politics, and the Mass Media," *Public Understanding of Science* 9 (2000): 261–83.

Demeritt has posited, “the 1988 heat wave and drought in North America were arguably as influential in fostering public concern as any of the more formal scientific advice”.³⁸

Second, a number of more *political* events began to emerge at this time. For instance, NASA scientist James Hansen forcefully warned Congress that global warming was a reality. On the Senate floor he stated that he was “99 percent certain” that warmer temperatures were caused by the burning of fossil fuels and that they were not solely a result of natural variation.³⁹ Moreover—and giving testimony on one of the hottest days of the year—Hansen also asserted that “it is time to stop waffling so much and say that the evidence is pretty strong that the greenhouse effect is here”.⁴⁰ In the US, the impending presidential election also played a part, as campaign rhetoric became tinged with mentions of climate change and global warming. On the campaign trail that year, then-candidate George H.W. Bush acknowledged the seriousness of global warming, and promised the administration would substantively address the issue.

Third, scientific stories shaped media representational practices. Prominently, 1988 was the year in which the United Nations Environment Program and the WMO created the Intergovernmental Panel on Climate Change (IPCC) in Geneva, Switzerland. Also, the WMO held an international conference called *Our Changing Atmosphere* in Toronto, Canada.⁴¹ At this conference, 300 scientists and policymakers representing 46 countries convened, and from this meeting, participants called upon countries to reduce carbon dioxide emissions by 20 percent or more by 2005.⁴²

Together, ecological, political and scientific factors intersected to dynamically bring the issue of climate change clearly onto the public arena.⁴³ At that time, narratives conformed to journalistic norms and the informational

38 Demeritt, David, “The Construction of Global Warming and the Politics of Science,” *Annals of the Association of American Geographers* 912 (2001): 307.

39 Weisskopf, Michael, “Two Senate Bills Take Aim at ‘Greenhouse Effect,’” *The Washington Post*, July 29, 1988, A17.

40 Shabecoff, Philip, “Global Warming has Begun, Expert Tells Senate,” *The New York Times*, June 24, 1988: A1.

41 Pearce, F., *Turning Up the Heat: Our Perilous Future in the Global Greenhouse* (London: Bodley Head, 1989).

42 Gupta, Joyeeta, *Our Simmering Planet: What To Do About Global Warming?* (New York: Zed Books, 2001).

43 Wynne, Brian, “Scientific Knowledge and the Global Environment,” in *Social Theory and the Global Environment*, ed. T. Benton and M. Redclift (London: Routledge, 1994), 169–189; Irwin, Alan, and Wynne Brian, ed., *Misunderstanding Science? The Public Reconstruction of Science and Technology* (Cambridge: Cambridge University Press, 1996).

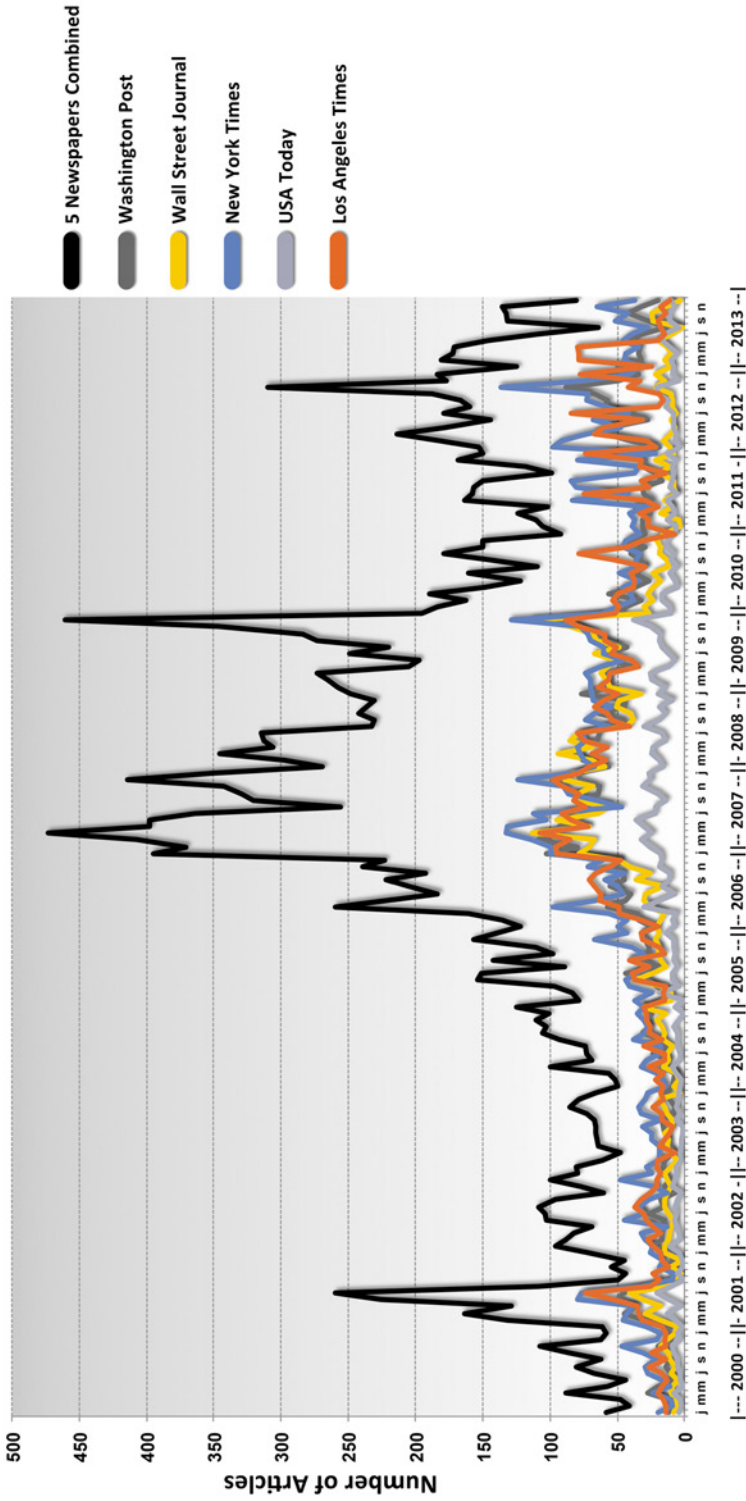


FIGURE 7.1 US newspaper coverage of climate change/global warming⁴⁴

44 Caption: This figure tracks newspaper coverage of climate change or global warming in five newspapers in the United States from January 2000—December 2013). These newspapers are the *Los Angeles Times*, *The New York Times*, *USA Today*, the *Wall Street Journal*, and *The Washington Post*. For monthly updates go to: http://sciencepolicy.colorado.edu/media_coverage/.

predilections of newspaper and television news media. According to Sheldon Ungar, “what rendered 1988 so extraordinary [in terms of the growing profile of climate change issues] was *concatenating* physical impacts *felt* by the person in the street”.⁴⁵

To show a more contemporary perspective on climate change coverage in the media, figure one appraises the trends in media coverage of climate change from 2000 into 2013 in newspapers in the US. Generally, stories tracking issues, events and information on ‘environmental issues’ (of which climate change is a subset) have continued to occupy a small nook in news overall. In other words, relative to other issues like health, medicine, business, crime and government, media attention to climate change remains a mere blip.⁴⁶

Tracking US American media treatment of climate change and global warming through these intersecting *political*, *scientific*, and *ecological/meteorological* climate themes provides a useful framework for analyses of content and context. Such accounting helps then to demonstrate how news pieces should not be treated in isolation from one another; rather, they should be considered connected parts of larger political, economic, social, environmental and cultural conditions. Moreover, patterns revealed in the mobilisations of journalistic norms internal to the news-generation process cohere with externally influenced dominant market-based and utilitarian approaches that consider the spectrum of possible mitigation and adaptation action on climate change. Robert Brulle has argued that an excessive mass media focus merely on the debaters and their claims “works against the large-scale public engagement necessary to enact the far-reaching changes needed to meaningfully address global warming”.⁴⁷ As such, examinations of the content of US media treatment of climate change, within a context of larger political and social forces, provide useful insights into wider considerations taken up in companion contributions to this volume.

45 Ungar, Sheldon, “The Rise and (Relative) Decline of Global Warming as a Social Problem,” *The Sociological Quarterly* 33 (1992): 490.

46 Project for Improved Environmental Coverage (PIEC), *Environmental Coverage in the Mainstream News: We Need More, An Inaugural Ranking Report*, published January 2013, accessed December 14, 2013. <http://environmentalcoverage.org/>.

47 Brulle, Robert J., “From Environmental Campaigns to Advancing a Public Dialogue: Environmental Communication for Civic Engagement,” *Environmental Communication—A Journal of Nature and Culture* 4.1 (2010): 94.

5 New Forms of Climate Stories? Appraising North American Public Sentiment

The US American ‘public citizenry’ are actually comprised of complex and heterogeneous sets of varied interests, perspectives, beliefs and concerns. Nonetheless, in parallel with attempts to track the science, effects and causes of climate change, over time there have been many efforts undertaken to understand the ‘public mood’. Despite its limits, the most readily accessible way to put one’s proverbial finger on the pulse of public sentiment has been through polling data. However, the explanatory power derived from polling data can be problematic and potentially tricky to handle.

Questions regarding public acceptability of various policy tools such as Cap and Trade or carbon taxation can provide helpful insights into questions of feasibility and latent public pressure. For example, the *Six Americas* studies conducted by Ed Maibach, Connie Roser-Renouf, Anthony Leiserowitz and colleagues have sought to provide greater texture regarding US public views on numerous climate policy measures and personal actions. Through public polling since 2005, they have defined six distinct groupings of citizens in the US with regard to their views and perceptions of the costs and benefits of reducing fossil fuel consumption and ameliorating the negative impacts of climate change. Moreover, this polling assesses varied support for different national climate and energy policies, and appraises the differing beliefs about efficacy of climate policy decision making. These “Six Americas” are described as “alarmed”, “concerned”, “cautious”, “disengaged”, “doubtful” and “dismissive”. Their polling has provided useful and important insights into how considerations of US perspectives facilitate more tailored and effective messaging on climate and energy issues. Furthermore, these approaches help to more capably consider how issues such as how religion, ideology and gender permeate support (or lack of support) for climate action, as well as related issues such as energy efficiency improvement measures.⁴⁸

Yet pitfalls arise when science-based evidentiary questions are put on the same platform. In other words, it is fundamentally problematic when pollsters reduce expert based science questions to the same domain as vox populi opinions or beliefs. For example, a February 2010 BBC/Populus poll posed the question, “From what you know and have heard, do you think that the Earth’s climate is changing and global warming is taking place?” Such a question invites opinion through a range of ways, from whether a respondent may wish it

48 Maibach, Edward, Connie Roser-Renouf, and Anthony Leiserowitz, *Global Warming’s Six Americas: An Audience Segmentation Analysis*, Yale Project on Climate Change and George Mason University, 2012.

was not taking place to whether someone on the street or in mass media told them that it was not happening. Such a way of approaching the issue then privileges opinion at the expense of valuing relevant expert research and authority.

In the context of newsroom cuts and shrinking funds for investigative journalism, an increase in the percentage of stories on climate change devoted to polling data can be anecdotally observed. Poll results readily provide an appealing news hook into making sense of public views and sentiments in the complex issues associated with climate change and require little investigative work to assemble. Polls can indeed provide utility in terms of gauging possible public support for various policy actions on climate change. Yet, along with these trends comes the risk of reducing issues of expert-based scientific understanding to that of mere opinion. More to the point, however, polling agencies exhibit recklessness through such approaches, particularly when understaffed news agencies pick up their findings at face value in order to file a story on an ever-tightening deadline. While getting their latest polls picked up in the press may translate to commercial success, this carries the risk of giving potentially mistaken impressions of public sentiments in the US and elsewhere. Overall, as John Wihbey has put it, “Public opinion polls and surveys are attention getters, headline grabbers. Reporters and editors love them. Sometimes they should learn to hate them [...] or at least to approach each one with a healthy dose of skepticism”.⁴⁹ Nowhere is this more the case than in the context of climate change, reporting and mass media coverage of politics and policy activities.

6 Conclusions

The road from information acquisition via mass media to various forms of engagement and action is far from straightforward and is filled with turns, potholes and intersections. This is a complex arena: mass media portrayals do not *simply* translate truths or truth-claims nor do they fill knowledge gaps for citizens and policy actors to make ‘the right choices’. Moreover, media representations clearly do not dictate particular behavioural responses. For example, research by O’Neill et al. has shown that fear-inducing and catastrophic tones in climate change stories can inspire feelings of paralysis through powerlessness and disbelief rather than motivation and engagement. In addition,

49 Wihbey, John, “Polls and Surveys Grab Media Headlines: But Beware Polling Pitfalls on Climate Change,” published by Yale Forum on Climate Change and the Media, June 16, 2009.

they found that imagery connected with climate change influences saliency (that climate change is important) and efficacy (that one can do something about climate change) in complex ways amidst the US public.⁵⁰ Among their results, they found that imagery of climate impacts promoted feelings of salience, but undermined self-efficacy, while imagery of energy futures imagery promoted efficacy. Overall, media portrayals continue to influence—in non-linear and dynamic ways—individual to community- and international-level perceptions of climate science and governance.⁵¹ In other words, mass media have constituted key interventions in shaping the variegated, politicised terrain within which people perceive, understand and engage with climate science and policy.⁵²

Moreover, financial and political interests continue to shape these representations. Their influences can be traced back to asymmetrical power derived from control over the means of production since the 18th century Industrial Revolution. Contemporary examples trace paths through issues involving corporate control, intersecting interests with carbon-based groups, and particular stances and perspectives. An oft-cited example is Fox News (a holding of Rupert Murdoch's News Corporation), a US-based outlet known for its contrarian positions on climate science and decision-making.

Mass media comprise a community where climate science, policy and politics can readily be addressed, analysed and discussed. The way that these issues are covered in media can have far-reaching consequences in terms of ongoing climate scientific inquiry as well as policy activities and public perceptions, understanding and potential engagement. In this contemporary environment, numerous 'actors' compete in these media landscapes to influence decision making and policy prioritisation at many scales of governance. Multitudinous ways of knowing—both challenged and supported through media depictions—shape on-going discourses and imaginaries, circulating in various cultural and political contexts and scales. Furthermore, varying media representational practices contribute—amid a complex web of factors—to divergent perceptions, priorities and behaviours.

50 O'Neill, Saffron et al., "On the Use of Imagery for Climate Change Engagement," *Global Environmental Change* 23.2 (2013): 413–421. doi.org/10.1016/j.gloenvcha.2012.11.006.

51 Wilby, Peter, "In Dangerous Denial," *The Guardian*, June 30, 2008, 9.

52 Krosnick, Jon A. et al., "The Origins and Consequences of Democratic Citizens' Policy Agendas: A Study of Popular Concern About Global Warming," *Climatic Change* 77.1 (2006): 7–43; Goodman, Michael, and Emily Boyd, "A Social Life for Carbon?: Commodification, Markets and Care," *The Geographical Journal* 177.2 (2011): 102–109.

More media coverage of climate change—even supremely fair and accurate portrayals—is not a panacea. In fact, increased media attention to the issue often unearths more questions to be answered and greater scientific understanding actually can contribute to a greater supply of knowledge from which to develop and argue varying interpretations of that science.⁵³ At best, media reporting helps address, analyse and discuss the issues, *but not answer them*. And dynamic interactions of multiple scales and dimensions of power critically contribute to how climate change is portrayed in North American media. As we have detailed above, mass media representations arise through large-scale (or *macro*) relations, such as decision making in a capitalist or state-controlled political economy and individual-level (or *micro*) processes such as everyday journalistic practices as well as, now, the use of polling data. This contribution seeks to help readers of this volume work through some of the key cultural dimensions of climate change in the US context. Through this contribution, we have sought to lay some groundwork for readers to then pursue these issues in more detail, as contexts and conditions change going forward into this, the 21st ‘climate changed’ century of the Anthropocene.

53 Sarewitz, Daniel, “How Science Makes Environmental Controversies Worse,” *Environmental Science and Policy* 7 (2004): 385–403.