Visualizing Climate Change: Television News and Ecological Citizenship

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. . . ecological images and symbols are by no means scientifically confirmed as intrinsically certain knowledge. They are culturally perceived, constructed and mediatized; they are part of the social knowledge 'fabric,' with all its contradictions and conflicts. The catastrophic consequences of climate change must, as we have seen, be made visible, that is they must be effectively staged in order to generate pressure for action.

~ Ulrich Beck, (2009) World at Risk, p. 86

Television images can provide powerful symbols of ecological disaster. As Ulrich Beck notes (2009, p. 86), the catastrophic consequences of climate change must be made visible not only to enhance understanding, but also to generate pressure for action. Taking our cue from current social theoretical ideas about media and ecological citizenship, as well as from Beck's writings on the "symbolic politics of the media," we set out to empirically examine the nature of climate change visualization within television news. We explore two analytically distinct dimensions of news visualization: 1) pictures, scenes, and spectacular images of nature(s), places, and people as under threat; and 2) how accessed strategic relations of contention are visually infused with signs of trust and credibility. To better understand the contribution of the news media to ecological citizenship, we argue that we must attend to both of these visual rhetorics and examine how each enters into the public representation, elaboration, and now-deepening contentions of climate change.

Introduction

Television images can provide powerful symbols of ecological disaster. A smoking stump can symbolize destroyed forests; a single protestor can represent widespread social anxiety; a billowing chimney can stand for unchecked industrial pollution. Contemporary concerns about climate change are infused by such images — and necessarily so. It is hard to imagine that climate change could have become the perceived "global crisis" that it has in recent years without the help of media images symbolizing the harmful impacts of climate change on people, communities, and environments around the world. Whether they be scenes of melting Arctic ice caps, drying Amazonian forests, encroaching North African deserts, or the impacts of rising sea levels on small islanders in the Southern oceans, in such images, the abstract science of climate change is rendered culturally meaningful and environmentally consequential. Geographically remote places become literally perceptible places of possible concern.

News media and news images have long performed an important role in the mediated career of climate change including its eventual recognition and constitution as a global crisis now demanding concerted political response from governments, corporations, and citizens around the globe. Climate change has evolved from its earlier emergence as an occasional publicized *debate within science* to a public debate framed by *mediated scepticism* about scientific claims, and more latterly, to a stage of *media-promulgated sense of threat* and widely acknowledged "global crisis" (Antilla, 2004; Carvalho, 2007; Monbiot, 2007, pp. 20-42; Cottle, 2009, pp. 71-91). Throughout this news-mediated career, images have performed a crucial, if often underestimated part in the progressive elaboration and shifting public "views" of climate change.

This article sets out to explore the complex ways in which television news visuals have recently contributed to the constitution of climate change as a global issue, and it does so at a particular historical juncture: the time when climate change began to be perceived as a global threat within much of the world's news media. In this critical moment, the vociferous minority of climate change skeptics and deniers who had earlier won privileged news access through corporate lobbying and professional journalism norms of "balance" (Boykoff & Boykoff, 2004, 2007; Monbiot, 2007) finally became dislodged by the overwhelming weight of scientific evidence and climate-related events. Taking our cue from current social theoretical ideas about ecological citizenship with Ulrich Beck's recent writings on how mediatized symbols and the staging of global interdependency crises, including climate change, can sustain global awareness and cosmopolitan responses, we set out to empirically examine the nature of climate change visualization within television news at this critical moment. We aim to get behind the rather speculative sweep of Beck's assertions about the cosmopolitan thrust of mediatized ecological images and symbols to examine more closely the way climate change has been visualized within television news.

Here we attend to two analytically separable — though often overlapping in practice — dimensions of news visualization. The first addresses visual scenes and spectacular images of nature(s), places, and people under threat. The second concerns the imaging of strategic relations of contention, or how competing views and voices become accessed and visually staged in news about climate change. On Beck's so-called "relations of definition" (Beck, 2005, p. 106), we explore how these different actors are imagistically infused with signs of authority, trust, and credibility. Taken together, these two *visual*

rhetorics — the spectacularization of nature and threats and the imaging of social and strategic "relations of definition" — infuse the public visualization and elaboration of news about climate change.

To better understand the contribution of the contemporary news media to the possible emergence of ecological citizenship, or even, as suggested by Ulrich Beck, an emergent cosmopolitanism, we must attend to *both* these visual rhetorics and examine close-up how each one enters into the public representations, elaborations, and now deepening contentions of climate change. When we do so, a more grounded and, sometimes, more complex picture emerges of how climate change is "made visible" and "ecological images and symbols" can, potentially, "generate pressure for action" (Beck, 2009, p. 86).

Climate Change and Ecological Citizenship

The establishment of climate change as possibly *the* defining crisis of the global age is now evidenced, if shakily, across much of the industrialized world: politically, in public support for national governments' signing international treaties on climate change; economically, in the introduction of carbon-trading schemes and more localized and individualized measures to reduce emissions; and socially and culturally, with the emergence of a widespread awareness of climate change as a global threat and the embedding of this concern within cultural products, from advertising to lifestyle programs and film (Linder, 2006; Lindahl Elliot, 2006, p. 233; Hansen & Machin, 2008).

From earlier research, we know that visual symbols can command public attention in environmental politics (Macnaghten & Urry, 1998, p. 58), and that spectacular images can help to legitimize political challenges and mobilize support (DeLuca, 1999; Lester, 2007). Images of the environment found both within the news and more widely often come with historically long and culturally deep resonances, conveying potent meanings around "tradition" and "modernity," "community" and "alienation," and "nature" and "industrialism" (Cottle, 2000, pp. 39-44; Cottle, 2006, pp. 130-137); and so, too, can they contribute to our sense of self, identity, and place in the world (Macnaghten & Urry, 1998, p. 152; Franklin et al., 2000, p. 26). Recent research also indicates that television visuals can play an important role in the development of global environmental awareness and contribute to a sense of ecological citizenship and associated rights and responsibilities (Urry, 1999, 2000; Szerszynski & Toogood, 2000; Szerszynski & Urry, 2002, 2006). Through this research, Szerszynski highlights the tension that exists within the concept of environmental citizenship, the tension between dwelling in a local place, with the moral rights and responsibilities that entails, and developing a sense of global responsibility, which relies in part on absenting oneself from a particular place via "a transformation of vision, one that relies on an imaginative removal of the self from immediate everyday engagement in the world" (2006, p. 75). Emphasising the importance of the visual in the practice of citizenship, Szerszynski notes that to be an environmental citizen "is to have one's perceptions and actions in a local context transformed by an awareness of that locality's connections with and nesting within a wider, ultimately global context" (2006, p. 75).1

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¹ For a useful review of debates surrounding environmental citizenship, see also Dobson, 2003.

Here, images of "banal globalism" can play their part. These almost unnoticed symbols of globalism that are now routinely featured across televisual images and narratives can help to create a "sensibility to the cosmopolitan rights and duties of being a 'global citizen'" (Szerszynski, Urry, & Myers, 2000, p. 99). Szerszynski et al. argue that three particularly significant categories of media images provide "unremarked-upon" global context for various kinds of action: the globe, which suggests we all belong to the same planet; environments, which symbolize wider threats and risks; and people, including celebrities, who are made to stand and speak for the human race (2000, pp. 103-105). These images propose "possible relations to other people and the Earth as a whole, and such new sets of relations can carry powerful feelings of helplessness or responsibility, distance or engagement" (2000, p. 106).

The role of media images thus appears crucial in understanding news-mediated awareness of climate change and associated ideas of ecological citizenship. As Szerszynski and Toogood note, rather than viewing the global mediasphere as a "disorientating, yet liberating, world of surfaces, virtuality, instantaneity and depthlessness," the new "global cultural space created by increasing flows of images and signs may provide resources for the constitution of new identities and reimagination of solidarity and care at the global level" (2000, pp. 226-227). Macnaghten and Urry also propose an important caveat, however, noting how "issues of trust are central to whether or not people believe media stories about environmental matters, and to the extent to which they will be likely to identify with, or participate in, officially defined environmental initiatives" (Macnaghten & Urry, 1998, pp. 99-100) — an important observation that we develop further with reference to the ideas of Ulrich Beck.

Beck, Symbolic Politics and the Media

In his earlier writings, *Risk Society* (1992) and *World Risk Society* (1999), as in his more recent treatises, *Cosmopolitan Vision* (2006) and *World at Risk* (2009), Ulrich Beck grants media, and especially television, a central role in maintaining both public knowledge and public anxiety. The political site of the world risk society, he argues, is not the street but the mass media, and television particularly. It is here, in the interplay of media politics and symbolic power, that we discern the media's pivotal part in growing ecological awareness, sense of threat, and possible action:

Herein lies a crucial limitation of direct politics. Human beings are like children wandering around in a 'forest of symbols' (Baudelaire). In other words, we have to rely on the symbolic politics of the media. This holds especially because of the abstractness and omnipresence of destruction which keep the world risk society going. Tangible, simplifying symbols, in which cultural nerve fibres are touched and alarmed, here take on central political importance. These symbols have to be produced or forged in the open fire of conflict provocation, before the strained and terrified public of television viewers. The key question is: Who discovers (or invents), and how, symbols that disclose the structural character of the problems while at the same time fostering the ability to act? (Beck, 2009, p. 98)

Television images can also contribute to a cosmopolitan outlook, argues Beck, through the willingness to "put oneself in the position of the victims, something which is also in large part a product of the mass

media" (2006, p. 6). A "globalisation of emotions" and empathy occurs when "global everyday existence becomes an integral part of media worlds" and people "experience themselves as parts of a fragmented, endangered civilization and civil society characterized by the simultaneity of events and of knowledge of this simultaneity all over the world" (2006, p. 42). In such ways, argues Beck, national boundaries and political agendas are exploded, and global publics are born (Beck, 2006, pp. 6, 35-36).

But there is more to the visualization of global crises than the images of victims, environmental threats, and other symbols of destruction. As Beck himself is aware, the epistemologies of "global threats" and contemporary "interdependency crises" depend on their articulation and advancement by contending "relations of definition." From a social constructionist perspective, the "world risk society is not a function of the globality of problems (as diagnosed by science) but of 'transnational discourse coalitions' (Hajer) that place the global threat to the environment on the public agenda" (2009, p. 86). And, as we have already heard above, issues of trust, credibility, and legitimacy are also at play in the social relations of climate change. So the ways different discourses about climate change are accessed, embodied, and represented by contending agencies and actors, as well as the ways the latter become visualized on the news stage thereby also enter into the symbolic politics of climate change. An analysis of the visualization of climate change must, therefore, attend to not only the symbols and scenes of nature and threats posed by climate change, but also to the imaging of "relations of definition" if we are to secure increased empirical traction on generalizing claims about the media's involvement in ecological citizenship and the emergence of a cosmopolitan vision.

TV News Visualizing Climate Change

Our analysis is based on a comprehensive two-week sample period of daily and high-rating news programs in six countries — UK, USA, Australia, South Africa, India, and Singapore — and four Satellite TV broadcasters — BBC World, CNN International, Fox News, and Sky News Australia.² At the time, climate change was on the cusp of becoming cemented as a global crisis, with the sample capturing significant moments (Carvalho, 2005, p. 6) in both its progressive constitution as a "global crisis" and its transformation from contested environmental science to accepted political, economic, and social concern. In September 2004, for example, then-UK Prime Minister Tony Blair made a major policy speech, declaring that unchecked climate change had the potential to be catastrophic in both human and economic terms. In the United States, California introduced tough new standards for vehicle emissions to reduce greenhouse gasses. Meanwhile, Hurricane Ivan — one of the biggest storms ever registered in the

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² A note on the sample: Six representative news programs were recorded and analysed from each of the six countries and four satellite broadcasters across a 2-week period (September 13 – 26, 2004), including both public service and commercial news broadcasters. These were selected on the grounds of being the state broadcaster, having the highest commercial ratings, and being the daily news provider. The sample was collected for the research project *Television Journalism and Deliberative Democracy: A Comparative International Study of Communicative Architecture and Democratic Deepening* (DP0449505), which was funded by the Australian Research Council (see Cottle & Rai, 2006). The authors acknowledge the invaluable help of Mugdha Rai in collecting the sample and preparing the quantitative data that has informed this discussion.

Caribbean and Gulf of Mexico — moved slowly but steadily toward the U.S. Gulf states, followed closely by Hurricane Jeanne, which ravaged parts of Cuba and Haiti before also heading for the U.S. coast. In Australia, geo-sequestration was supported both by scientists and government as a future solution to the greenhouse gas problem. It was in this world context that we identified and analyzed the visuals of all stories that explicitly focused on climate change. Before we turn to a qualitative analysis of the two principle visual rhetorics organizing televisual news representations of climate change, it is first useful to consider the basic visual elements of these news stories in comparison to other global issues in the news.

The sample period produced 27 news stories explicitly about climate change, and these appeared primarily in the USA, UK, and Australia, as well as on satellite, with only one story each in South Africa and Singapore, and none identified in India — a finding pointing perhaps to a continuing north-south divide in respect to environmentalism and the news media (Chapman et al., 1997). Three categories of news visuals were identified and quantified across the sample: *iconic visuals* that purport to represent what is being discussed (for example, visuals of a water-logged Pacific island in a story about the impact of rising sea levels on a particular community); *symbolic visuals* that represent something larger or broader than the image itself, beyond the literal (for example, visuals of black smoke pouring out of factories in a news item about industrial air pollution); and *spectacular visuals* that are deployed to seemingly invite responses of awe or dread (for example, slow panning shots of pristine wilderness and shots that dwell on natural landscapes, or alternatively, visuals focusing on the destructive force of extreme weather events).⁴

³ The climate change news stories that form the basis of the discussion and analysis below appeared in and on the following countries and news programs on the following dates:

Australia: Channel 10, Ten News, September 13; ABC, ABC News, September 13, 18, 24.

Singapore: Channel i, Channel i News, September 25.

South Africa: SABC Africa, Today in Africa, September 25.

UK: BBC1, BBC1 News, 13, 14 Sept.; BBC2, BBC2 Newsnight, September 14; Channel 5, Five News, September 14, 17, 19, 20, 21, 23, 24; Channel 4, Channel 4 News, September 14.

USA: ABC (USA), ABC World News, September 17; PBS, PBS News, September 16; CBS, CBS Evening News, September 24.

Satellite TV: Sky News Australia, Sky News UK, September 13, 14; Sky News Australia, Five Live, September 18; Fox News, O'Reilly Factor, September 14; Fox News, Fox Report, September 25; BBC World, BBC World News, September 25.

The quantitative distribution of climate change items across the six sampled countries reflect the distribution of items in the broader "Environment/Risk" global theme category (858 items), in which the USA had the highest prevalence of stories on environment and risk (13.5), with India having the lowest (1.5). No statistically relevant variation was detected between broadcasters within each country.

⁴ For the purpose of this general analysis, news items were coded according to their most elaborate use of visual images, with spectacle subsuming symbolic and iconic images, and symbolic images subsuming iconic images, and iconic images standing alone. Iconic and symbolic visuals were differentiated when read in the context of particular news reports in terms of whether they simply described/documented the claims in play or, in fact, "exceeded" such descriptions by culturally pointing to higher levels of meanings and association.

In our sample of climate change news items, the use of symbolic (33.3%) and spectacular (18.5%) visuals was pronounced, with more than half (51.8%) of all climate change news stories deploying these culturally resonant and affective forms of visualization, far more often than other news items covering different global themes.⁵ Both symbolic and spectacular images, then, are especially prominent within the field of climate change reporting, and this may tell us something about their performative news deployment at this present juncture. But how, exactly, climate change is visualized within these same news reports clearly demands closer examination.

Visualizing Nature(s), Places and People Under Threat

Our sample suggests that most Western news media now accept the reality of human-induced climate change, a position which registers both across news agendas and in the performative deployment of spectacular images. These images, we also suggest, can play a prominent part in "bringing home" the threat and reality of global climate change, as well as in its positioning for many, particularly within the West, as possibly the crisis of the global age (Cottle, 2009, pp. 71-91).6 For example, stand-alone symbolic images and spectacular filmic flows that encourage an affective response within the sample range from scenes of sunsets over an ice-filled sea to the sunrise over a tiny Pacific island, from trees bent in hurricane-force winds to billowing smoke sourced to an ugly industrial-scape. Such images invite viewers to recognize and possibly respond to the rise and risks of climate change — whether at local, national, or global levels.

Depictions of the globe in the context of news on climate change have also now become commonplace in the media, as they have in the iconography of news journalism more generally. It is now typical, for example, for broadcasting corporations around the world to brand their news programs, opening title sequences, and logos with images of the globe, with themselves invariably depicted at the hub of world communication flows (Cottle, 2009, pp. 84-91). In our sample, Australia's ABC News deploys

⁵ These stories and their visuals were compared to other global themes, including environmental/risk stories more generally that did not have climate change as their central focus. "Environment/Risk" was the third highest (20.4%) of six identified global themes though less frequent than "War on Terror/Terror" (39.4%) or "Capital/Trade Flows" (26.6%), but markedly higher than global themes of "Cultural Identities" (8.0%), "Human Rights" (4.8%) and "Migration/Refugees" (0.9%). In the broad global theme of "Environment/Risk," the use of symbolic visuals (9.7%) and spectacular images (7.6%) was far more prominent than in any other global theme, with the use of spectacular scenes appearing almost twice as often as the combined global theme average (4.2%).

⁶ This is not to suggest, however, that images of global warming and climate change, as with images of ecology more generally, are not produced and circulated strategically within advertising and other promotional activity for commercial gain (Linder, 2006; Hansen & Machin, 2008), as part of political conflicts and campaigns (Lester 2006, 2007), or with the express intention of creating/sustaining a cosmopolitan empathy in viewers (Cottle, 2009). People viewing these images, moreover, can accept their intended meaning and symbolism, or reject them, and they may increasingly do so on the basis of perceptions of their strategic deployment and the intentions behind them (Szerszynski, Urry, & Myers, 2000).

a graphic comprising a globe and native flowers during presenter introductions to news stories on climate change, while its competitor Channel 10 combines a blue globe with a smoke stack and lines of traffic.

This stock of global imagery is also deployed to call attention to the specificity of local places threatened by climate change. Reports in a series on the UK's Channel 5, "Disappearing World," begin with a graphic referencing a satellite image showing continents and oceans, and then the graphic changes to highlight the threatened locality in question. This serves both to locate the subject of the story, and to draw the viewer's attention to the universality and globality of the crisis one local community faces, a crisis which is then revealed via the spectacular visuals that follow. Likewise, maps are not only static representations of far away threatened places that depict "locations less as inhabited places and as decontextualized formations, distant and irrelevant to Western spectators" (Chouliaraki, 2006, p. 101), they can also be integrated into the "symbolic fabric" of threatened lives and possible solutions in a highly localized way. In our climate change sample, for example, maps appear on the walls of victim's homes alongside photographs of family members, or behind the desks of scientists, or in the hands of local officials out in the field. Close-ups of fingers pointing to features on these maps not only further localize the problem, but also humanize it.

Stories that localize the global crisis of climate change are common in television news. Visuals are often grounded in a particular place and honed in on loss of life, and in so doing, private loss is revealed, the threat becomes a domestic one, and viewers in their own homes are invited to care. This is repeated time and again through the sample, using a variety of visual devices. For example, stories on disappearing glaciers in China and Nepal use establishing mid-shots of domestic streetscapes with residents going about their business before panning up or zooming out to reveal distant mountains and rocky surfaces exposed by retreating ice. This flow between the domestic and a threatened environment reinforces the connection between people's lives and nature. In a variant, the camera pans from a domestic street scene in the UK to rest on the industrial scape behind that spews smoke into an already darkened sky. Here, the connection is visually reinforced further, identifying the source of the threat. Clearer still are the scenes of private domesticity within the threatened landscape, such as those employed in stories on coastal damage in Alaska and the UK. Families are shown preparing meals in the homes that the stories have already established as threatened. The stories cut from within the home to distant exterior shots which reinforce the imminent risk, and then back inside with the victims. A particularly powerful and often repeated variant shows people packing up belongings, readying to leave their homes.

Cultural resonances that are embedded in the past and reliant on shared or imagined memories are also repeatedly called upon to establish the magnitude of crisis and loss, and to invite the viewer to care. Personal photographs of victims' family members are used to establish the longevity and right to belong to a place, as are establishing shots of cemeteries, ruined schools, and garden debris. The camera repeatedly dwells upon the elderly and children, living and playing in the threatened environment. Children playing in snow on a melting Chinese glacier, women praying in a Nepalese temple; these are activities that translate visually to even distant viewers' cultural memories and lived experiences. One of the Channel 5 reports ends with an unsubtle call to the cultural resonances associated with the English coast: A young red-headed girl in a blue bikini stands on the water's edge, holding a large plastic beach spade beside a small sand castle, which — in close-up in the next shot — is washed away. Here, nostalgia

is a device deployed to encourage a sense of impending loss for not only an environment, but also for a national culture and pastime (Featherstone, 1993).

Moving away from a focus on specific place and into the realm of symbolic "environments," there are stocks of certain key visuals we found to be commonly associated with climate change reporting, and these can be categorized into two main categories of *causes* and *impacts*. Cause images in our sample comprised billowing smokestacks, coal-fired power stations, and traffic on freeways. Here, the meaning for most Western viewers is clear and does not call upon complex cultural connections for the activation of symbolic meaning or power: This is a human-created crisis that requires a human response to avert. Such visual connotations may sometimes be politically contested — both science and industry groups have complained, for example, that using visuals of steam emissions from cooling towers is misleading (see, for example, Royal Society of Chemistry, 2007) — but symbolically, such associations continue to reverberate culturally.

The second set of visuals operates in a more complex fashion. These *impact* visuals can be split into *natural* and *human* impacts. The *natural impact* visuals are disconnected from humanity: the dripping glacier, the collapsing edge of an ice shelf, bared mountain rocks, the racing mountain stream, the lone polar bear pulling itself onto a small piece of ice. The *human impact* visuals, in contrast, are symbolically associated with individual and communal suffering and loss: suburban palm trees bent almost to the ground by wind, violent waves crashing over concrete retaining walls, the debris-strewn post-storm coastline, victims wading through flooded streets. When used in stories with a central focus on climate change, these images, often unanchored by explanatory words (Barthes, 1977, pp. 38-41), rely on the viewer to draw connections between storm events and global warming. These three sets of images — *cause*, and natural and human *impact* visuals — appear regularly together, as well as in various combinations and sequences in climate change stories.

Importantly, we need to be aware that it is not just the presence and arrangement of visuals, nor simply the referencing of extreme weather events within a climate change story that invites viewer response, but also how the flow of images and symbols within these and other stories now deploy similar "stock" visuals. Here, visual intertextuality is increasingly likely to be at work, with similar images potentially relaying (Barthes, 1977, p. 41) signs of climate change within, for example, news reporting of hurricanes or bushfires. While standard news reporting of disasters may have been largely silent regarding scientific and political discourse on any connection between climate change and extreme weather events, the deployment of extreme weather visuals in climate change stories encourages the implicit link for the viewer. When this visual relay becomes so evident as to call into question the integrity of the news story frame, scientific and political news sources are then called upon, in a more discursive form of news entry, to either acknowledge or dispel the connection. Images of the globe, for example, are common in both climate change reporting and disaster reporting, with dramatic satellite pictures tracking the course of hurricanes and disappearing ice-sheets, deforestation and forest fires. We suggest that such parallel use of visual sequences and scenes can only encourage visual relay and the possible connection with climate change in the foreseeable future.

"Human impact" visuals that cross between these two subject areas include families leaving their homes, victims inspecting debris-strewn waterways, and individuals battling gale force winds. These "impact" visuals can work with the "cause" visuals to mutually reinforce a global sense of responsibility, not only on the level of shared humanity, but — for the Western viewer — of actually being responsible for the problem, for causing the crisis itself. This invocation is often further underlined by the complex calls for compassion and empathy that can be embedded within disaster reporting (see Chouliaraki, 2006; Pantti & Wahl-Jorgensen, 2007; Cottle, 2009, pp. 50-60) and contrasted with the politicized and conflictual space occupied by the climate change issue. Journalistic norms and practices will usually prevent such direct invitations to respond and act within reporting on such a contested issue (Boykoff & Boykoff, 2004, 2007), but this is less so when framed in the de-politicized terms of humanitarian emergency. Of course, when the hurricanes are threatening the most powerful industrial nation and viewers witness the suffering of Westerners, the invitation is made even more strongly, reminding viewers that they may one day suffer through such environmental disaster themselves (Lindahl Elliott, 2006, pp. 233-234).

The visual rhetoric of television news that show images of nature(s), places, and people as under threat encourages viewers to recognize and possibly affectively respond to climate change. By referencing and deploying images of extreme weather events, a link is potentially created between these disastrous events and human-caused global warming — a link that is destined only to become stronger in the foreseeable future. It is also in this connection that we find, through the visual reporting of actual disasters, a further invocation to recognize and respond to climate change. Nevertheless, viewers are also being asked to respond via the personalization and domestication of a global issue and the often unsubtle but also symbolic reminders of the connection between a local place, cultural resonances, and global threat. As the quantitative analysis revealed, spectacular images are found more commonly in stories on climate change and environmental global themes than in any others, and these images can help to create a powerful sense of threat. However, as shown in the next section, there is more at work in television news' visualization of climate change than spectacle — and necessarily so.

Visualizing "Relations of Definition": On Staging Trust and Credibility

Though moving scenes and images of nature(s), people, and places under threat from climate change may well prove essential for the formation of public awareness and growing concern, spectacle remains insufficient as a basis for processes of mobilization and political responses. Such scenes cannot substitute for the necessary public elaboration and engagement of contending environmental perspectives and discourses (Cottle, 2000, p. 43). The ways "relations of definition," (Beck, 2000, 2005, p. 106) or the strategic play of different views and voices, identities, and interests, enter the news domain also perform a crucial role in television news' communication of climate change. And here, issues of trust can become critical, with viewers both seeking to gauge the credibility and legitimacy of experts, spokespeople, and other claims-makers and assessing those people's right to speak on behalf of others. Viewers need not necessarily share media assumptions about source credibility, but how different sources are represented can, nonetheless, inform judgments of trust and credibility made with respect to different speakers and their contending claims. Any attempt to understand the role of television news in communicating climate

change and animating it as a global crisis, therefore, must also consider the visualization of political, scientific, and other sources.⁷ Too often perhaps, studies of source access, whether conceived in terms of "hierarchies of credibility," "primary definers," or "claims-makers," remain confined to their more discursive and deliberative forms of news entry (for a review, see Cottle, 2003).

We also need to ask how images associated with these different spheres of ecological interest and action — science, governance, protest — function both alongside and separately from the spectacular images and their affective appeals. In this analysis, we make no formal separation between the scientific and political. As Beck, for example, has repeatedly noted, the media's crucial role in risk society involves portraying "conflicting definitions of risk, that is, their representation, or construction, of risks and uncertainties" (Beck, 2000, p. xiii). Here, science in the news media can undergo a similar process of construction and contestation as that of formal politics, political information, and challenger political sources. Political actors also repeatedly draw on scientific knowledge. Anabela Carvalho has observed, for example, that, "As new links are established between citizens, scientists, politicians and media professionals, the embeddedness of science and politics has become increasingly public and science has become more exposed to criticism, contestation and deconstruction" (Beck, 2007, p. 224). Much is at stake in this arena, therefore, including the allocation of symbolic power, or the ability to engage, influence, intervene, and affirm via symbolic forms (Thompson, 1995, p. 17). That this power now needs to be achieved across local and national boundaries, as well as globally in many instances, and that it is contested by an ever-increasing number of social actors, from politicians to scientists and the media themselves, make the stakes only higher.

Here, then, the news-imaging of sources, or Beck's "relations of definition" (Beck, 2000, pp. xii-xiv; Beck, 2005, p. 106; Beck, 2006, p. 23), is a necessary and revealing area for analysis. Just as ordinary people are usually visualized as victims, or Beck's "voices of the side-effects," shown within domestic settings or overcoming/succumbing to the impacts of climate change (Cottle, 2000, pp. 29-44), political and scientific sources — the experts, consultants, and spokespeople — have a similarly restricted repertoire of visual backdrops and locales in which to be interviewed or contextualized through establishing sequences. These, however, generally provide the source with a sense of purpose, duty, engagement, and credibility. Scientists, for example, are usually shown either at work in the field, which is invariably a harsh and challenging environment threatened by the effects of climate change; or they are at their desk with screens, files, and work colleagues in the background. Scientists in these settings do more than give information and opinions to the viewer. Firstly, they "bear witness" of the crisis for the public, if not with their own eyes then through the screen or the reports on their desks. But secondly, they also act. They measure glaciers and peer into the mouths of polar bears. They study maps and aerial photographs, and they work in bustling offices and laboratories, where they are too busy engaging with the crisis to be interviewed anywhere other than at their desks.

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⁷ We do not claim here that news visualizations of "relations of definition" function alone, nor do we claim that they preempt either words or the anchorage of words when working in combination with more discursive and deliberative forms of news entry.

This visual engagement with scientific sources in television news carries with it a public call to trust. This is reinforced by the fact that, in the longer-reportage stories in our sample, journalists are often positioned on camera engaging closely with their scientific sources. They discuss maps and historical photographs and, together, locate landscape features. In this way, the credibility of the journalist as a climate change "expert" is being visually reinforced, while also diminishing any sense of contestation or conflict surrounding the source. As Boykoff and Boykoff (2004, 2007) and others have noted, the balancing of scientist against skeptic was a clear feature of climate change coverage in the 1990s, while from a series of "working group discussions" with media and environmental sources, Smith finds that editors and journalists have a tendency to be less probing and reflective about the status of scientists as sources than they are about NGO spokespeople, and that they "do not carry with them a sense that science is primarily a process of contestation" (Smith, 2005, p. 1474). Our sample of visualized scientists confirms this legitimizing portrayal.

Politicians in our sample are usually shown addressing a crowd, in a studio interview, or as with Tony Blair on the eve of his major speech on climate change, inspecting the effects or technological products of climate change — in this case, solar panels. Politicians are thus visually afforded a similar capacity as scientists to engage with both the problem and the solution of climate change. Political dress, specifically the suit jacket, it appears, is a barrier to full engagement with the environment — as politicians have found it to be when dealing hands-on with any social problem in front of cameras — and climate change news is certainly not immune to the visual rolling-up-the-sleeves metaphor. The focus is on the individual's capacity to both be one of us and lead through the crisis. The popular cut-away shot to press photographers at the photo-op, media conference, or public address serves in this context to reinforce the centrality of the individual to the issue.

However, image politics and political celebritization is well known to many viewers and can carry with it significant dangers (Turner, 2004, p. 134). Within the political arena more widely, a range of individuals may be positioned strategically to stand for a threatened environment, public anxiety, political movement, or potential solution, and the symbolism that informs such representation can sometimes be derailed (Lester, 2006). The symbolic power of visualized access can depend on pre-established issues of trust and credibility, but also on the success of on-going political strategy. Nevertheless, when leadership on climate change is visualized, a range of visual cues are observed in terms of staging, setting, attire, and other visual props, and these can all add to, or detract from, their social standing and capacity to "represent" and "legitimize" climate change as a global crisis requiring action.

In contrast to politicians and scientists, climate change activists and NGO spokespeople are regularly interviewed and shown standing outside. They are in the landscape, but statically. They stand against a backdrop of "nature," if only a tree or a park, but do not engage with it in any way. Moreover, they are invariably firmly planted in a single locale. For a local activist — for example, the spokesperson for the local coastal action group — this makes sense. Their concerns, discursively presented via interview, are supported by the visual backdrop of a specific threatened place. This does not make sense, however, when the interviewee represents a major international NGO, such as Greenpeace. Here, spokespeople of these transnational advocacy movements — the "entrepreneurs of the global commonwealth" (Beck, 2006, p. 105) — are rarely associated with possible visual indicators of a global

sensibility and significance when accessed in such news formats as, for example, the studio-based interview or cross-shot from a busy office. Rather, they are grounded in a single place, thus crudely (at best) visualizing their global conception of environmental concerns, transnational actions, and politics aimed as problem-solving capacity.

This visual distancing of challenger groups and NGOs from the core of political cooperation and possible solution to the global crisis is reinforced, we find, by a repeated sequence shown in climate change television news. Here, the nation state and its formal government are granted visual supremacy in international efforts to solve the global crisis. The news events are formal international gatherings, but the camera typically rests on a table sign, bearing the name of "its" nation, before zooming out to show dozens more such signs and their national representatives. Another story has the camera panning from a single flag across dozens of others, to finally rest on a speaker addressing a large formal meeting. These stories begin by establishing climate change as a problem through the utilization of spectacular visuals of smoke stacks, blocked freeways, or extreme weather events, and thus position and visualize the multinational gathering and "the nation" as the key contributor to solving the global crisis. Of course, this visual primacy provided to the nation state in finding a solution to climate change may be nothing more than a symptom of a still emerging global culture (Featherstone, 1993), as well as of the very limited repertoire of symbols and images by which television news is able to portray global cooperation. However, our sample suggests that television news either carries an ongoing visual commitment to the nation state, or it has not yet found the necessary repertoire to adequately visualize Beck's explosion of boundaries and political agendas and the birth of global publics (Beck, 2006, pp. 6, 35-36), or both.

Through its politicized visualization of climate change, its semiotics of "relations of definition," television news maintains a strong disposition to claw back this global issue as it does other global crises, bringing it "back home" to be viewed from within the imagined political boundaries of the nation state (Cottle, 2009). This vantage point too often runs counter to the global imaginary, and possibly emergent, cosmopolitan outlook embedded within spectacularized scenes of environments under threat taken from around the world and above the planet.

Conclusion

This article has deliberately focused on the visual rhetorics deployed within television news of climate change. We have done so because we think that "the visual" has been under-researched and under-theorized as a powerful resource in the changing news-mediated career of climate change and its possible contribution to ecological citizenship (Urry, 1999, 2000) and emergent cosmopolitan outlook (Beck, 2006). News media, in their reporting on climate change, routinely visualize environments and people as under threat, and when they do so, they often deploy spectacular and culturally resonant images. This visualization, as discussed, can convey powerful symbolic messages and appears to be performatively deployed by professional journalists encouraging public recognition of the seriousness and the human consequences of climate change. As we have seen, it draws on a range of images and spectacular scenes that reference widely understood global symbols of climate change, as well as more localized cultural and historical resonances of place. Here, general statements and theorization about the role of media, and television visuals in particular, in contributing to a sense of "ecological citizenship," and

even in sustaining an emergent "cosmopolitan vision," find empirical support based in the visual scenes, symbols, and spectacles of climate change deployed by Western television news programs.

However, we have also argued that we need to be wary of placing too much emphasis on the power of spectacular visualization alone to galvanize sentiments, much less mobilize a cosmopolitan outlook. Here, as elsewhere, spectacle may prove essential for processes of mobilization and solidarity, but it cannot entirely substitute for the processes of political debate and deliberation which must also inform the politics of climate change, and which also become advanced through the vying interests, ideologies, and identities accessed onto the news stage. These "relations of definition" are themselves caught up within the semiosis of images, notwithstanding their discursive and language-based aims in the media sphere. As we have also seen, politicians, scientists, environmental protestors, and the victims of climate change are all subject to forms of visualization in which different signifiers of status, place, and agency routinely and variously ascribe meanings to them, including associations of authority, credibility, and trust. These visual stagings and ascriptions, then, also play a powerful role in the "symbolic politics of the media" and point to the more complex, sometimes contradictory, nature of climate change representation and visualization.

In these ways, the mediated politics of climate change becomes conditioned by these twin visual rhetorics, each capable of working independently, as well as in powerful combination, to variously help mobilize or mute appeals to ecological citizenship. The visual rhetorics of climate change, we conclude, are complexly involved in the constitution and mobilization of climate change as a global issue, and they can encourage "ecological citizenship," and even, possibly, lend credence to Beck's ideas concerning a discerned and emergent cosmopolitan outlook. But as we have seen, the way this "symbolic politics of the media" becomes visualized in practice and played out on the news stage exhibits complexities and contradictions, and these too often detract from television's potential to "generate pressure for action."

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