Framing Environmental Risks and Natural Disasters in Factual Entertainment Television

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Abstract:

This article examines the framing of environmental risks and natural disasters in factual entertainment television programs of the early 2000s, a hybrid form combining techniques from documentary with techniques such as dramatic reconstructions and computer generated imagery from entertainment genres. Using qualitative frame analysis, the article examines a range of factual entertainment television programs' framing of environmental risk and natural disasters in terms of their attitudes, representation of human participants, and visual composition. The article considers the similarities and differences in the framing of natural disasters as factual entertainment compared to the framing of natural disasters in news, documentary and fiction film. The article argues that such programs offer representational frames both consonant with and distinct from other media, and concludes that they problematically offer a predominantly fatalistic response to environmental risk, constructing natural disasters as voyeuristic spectacles for vicarious entertainment.

Keywords:

Factual Entertainment Television, Natural Disasters, Environmental Risk, Framing, Documentary.

Introduction

In an era of global warming, climate change, and the “risk society” (Beck, 1992), environmental risks have risen up public agendas over the last few decades. Amongst the most visible and concrete of environmental risks in terms of their mediation are those relating to “natural disasters”. The term “natural disaster” whilst common in public discourses, and used in disaster communication research to refer specifically to disasters relating to natural hazards, such as earthquakes and volcanoes (Svensen, 2009, p. 14), can be critiqued for failing to acknowledge the extent to which human agency makes natural disasters ‘unequally distributed and socialized hazards’ (Pantti et al., 2013, p. 18). Indeed, academic scrutiny of environmental risks highlights the centrality of the media to the social construction of natural disasters (Kitzinger, 1999, p. 55; Bakir, 2010, p. 5; Pantti et al., 2012, p. 17). Beck’s (1992) paradigmatic conception of the “risk society”, for instance, positions the mass media as one of the key sites responsible for “defining risks” (p. 23), and privileges their role “in the social construction, social contestation, and, further, social criticism of, or social challenge to, risks and the deficiencies of institutionalised responses to these” (Cottle, 1998, p. 9). For some decades a growing body of empirical research has emerged looking in detail at how mass media construct and represent environmental risks (see Bakir, 2010). A central concern of research focused on natural disasters has been “whether the media are effective in increasing preparedness and response to natural hazards, or if they present a distorted portrayal of the disaster situation” (Perez-Lugo, 2004, p. 211). This has focused research on normative evaluations primarily of the role of news media as “transmitters of official information” (p. 211), and in these terms, much of the

literature is highly critical of news media reporting of disasters accusing them of amplifying and distorting disaster risks (e.g. Vasterman et al, 2005). Such claims are not entirely uncontested (e.g. Kitzinger, 1999), yet more widely accepted is the view that in “the course of reporting major events as they unfold the media provides metaphors that ineluctably promote particular readings of these events” (Miles and Morse, 2007, p. 366). The media are seen as producing particular narratives around disasters that represent those events and issues in specific ways. For instance:

The folk-narrative nature of media coverage of disasters lends itself to the identification of villains- from individuals to groups to technologies and processes such as levees and wetland loss- on whom the failings of the disaster preparedness, response and recovery can be blamed. (p. 366)

A dominant strand in analyses of the representation of the environment in the news media in this regard, has been a focus on the importance of *framing*. Lakoff (2010) argues that “environmental frames are the (typically unconscious) conceptual structures that people have in their brain circuitry to understand environmental issues” (p. 74). Lakoff contends that changing peoples’ environmental frames, to engender (necessary) awareness and action in the face of global warming and climate change, is compromised by pre-existing dominant environmental frames perpetuated by vested ideological interests, and evidenced by their prevalence in the news (pp. 70-1).

As Kitzinger (1999) points out, however, “the important questions are not do the media ‘play up’ or ‘play down’ risk- but *which* risks attract attention, *how*, *when*, *why* and *under what conditions*” (p. 62, original emphasis). For instance, research suggests that the use of emotive and spectacular imagery of natural hazards and extreme weather in news

media reporting of climate change might positively mobilize audiences to ‘affectively respond to climate change’ (Lester and Cottle, 2009, p. 929). Furthermore, in an era in which audience attention to traditional news is waning it could be argued that “prime-time entertainment television may be particularly influential in constructing and maintaining political attitudes” (Holbert et al., 2005, p. 508). The representation of environmental risk and natural disasters in entertainment genres, particularly factual entertainment television programs, has been less extensively studied than representations in the news media (Bakir, 2010, p. 9). Studies have examined high profile individual texts, such as the disaster movie *The Day After Tomorrow* (Salvador and Norton, 2011), the non-fiction bestseller *A Civil Action* (Button, 2002), and award-winning documentaries like Al Gore’s *An Inconvenient Truth* (Rosteck and Frentz, 2009) and Spike Lee’s *When the Levees Broke* about Hurricane Katrina (Weik von Mossner, 2011). Bakir (2010) notes that some of this research “suggests that it is through fiction, rather than journalism, that the media most thoroughly contemplate future challenges that risks might pose, including what happens when things go wrong, so enabling us to explore moral, ethical and social consequences of certain actions” (p. 9). Similarly, in order to further explore media representations of environmental risk and natural disasters this article specifically examines factual entertainment television programs on natural hazards and extreme weather. Rather than focus on an individual text, this article looks at a range of series and programs, with the aim of identifying any apparent patterns in their framing of environmental risks and natural disasters [1]. It proceeds first with a discussion of factual entertainment television. It then explores the potential representational tropes and environmental frames already identified across a range of media in order to provide an analytical framework for the analysis of the

series and programs selected. The article then analyses the programmes, moving towards a conclusion arguing that such programs display consistent mythic and generic narrative elements in their depiction of environmental risks and natural disasters as entertainment.

Factual Entertainment Television

Factual entertainment television refers to a broad array of content increasingly prevalent in the multi-channel global television market where factual programming has to compete harder for audiences than in the days of restricted channels (Steeimers, 2004). It involves a move away from traditional modes of documentary exposition towards more entertainment-oriented topics, styles and formats (Steeimers, 2004). For instance, the use of dramatic reconstructions (i.e. scenes using actors rather than actuality footage), computer-generated imagery (CGI), and a range of other entertainment-oriented production techniques have become much more prevalent in recent years (Palfreman, 2002). Factual entertainment programs also are often noticeable in the way they blend traditional documentary with other genres producing new, and oft-criticised hybrid formats such as the docu-soap (Corner, 2002; Kilborn, 2003; Roscoe, 2004). Also, a technological shift to larger, widescreen, High Definition television sets has arguably seen a shift towards an increasing emphasis on “spectacular television” in contemporary broadcasting illustrated by factual entertainment programs (Wheatley, 2011).

There are two main reasons why this category of media content is of particular potential analytical value to the mediation of environmental risk and natural disasters. As the explanation above indicates, factual entertainment is seen as something of a poor relation to the more critically approved documentary. Whilst documentaries like *An*

Inconvenient Truth or *When the Levees Broke* are seen as serious texts both politically and, in the case of the Spike Lee film, aesthetically, factual entertainment television is not typically afforded critical acclaim or scholarly attention. It has been argued that “the science documentary occupies a particularly crucial discursive space in contemporary culture: it mediates between the competing claims of scientific and everyday understanding” (Rosteck and Frentz, 2009, p. 10), and if so then the shift from science documentary to factual entertainment is of potentially great significance for the quality of the communication of environmental risks. To illustrate this, natural hazards and extreme weather have become such a prevalent feature of contemporary factual entertainment television output that the sub-category of programs on these topics has even been given the pejorative label of “weather porn” by television critics (Boddy, 2000). The term has been used regularly to describe the programs and style of the Weather Channel in the USA (Patterson, 2000), as well as programs produced by Discovery (Gorman, 2009, p. 4), and National Geographic (Doyle, 2009, p. 3). It has also been used to label British programs too, such as the BBC’s *Superstorm* (Preston, 2007, p. 25), and ITV’s *Nature’s Fury* (James, 2009, p. 60). There’s little doubt that this is a pejorative label amongst television critics, as reflected in Gorelangton’s (2002) excoriation of the BBC’s *Wild Weather* as “an expensive and fatuous series” (p. 53). As Gorman (2009) explains, the label refers to “shows that deliver images of tornadoes uprooting houses, hurricanes bashing wharves and floods drowning cities [and also] deliver the same kind of vicarious physical kick -only to a more northerly portion of the anatomy” (p. 4). Gorman cites the program *Destroyed in Seconds* (US, 2009) as having refined the formula down to offering only “the money shot” of the moment of destruction (p. 4) [2]. Like other categories of content such as horror films

dubbed “torture porn” (Jones, 2013) or landscape programs referred to by one producer as “landscape porn” (in Wheatley, 2011, p. 244), using this label indicates a view that the depictions of the subject matter involve an excess of spectacle, sensationalism, gratuity, and arousal (as opposed to, say, informing or educating). This suggests such programs may offer a distinctive set of representations of environmental risk and natural disasters that warrants investigation.

Second, the increasing use of dramatic reconstruction and particularly of CGI in factual entertainment means that the scope of factual programs on environmental risks and disasters has expanded dramatically. Whereas the news media have been found to concentrate on specific risk events “ignoring long-term, continuous, complex, multi-causal or hypothetical risks” (Bakir, 2010, p. 6) factual entertainment programs have combined dramatic reconstructions with CGI to represent disasters from the distant past and hypothetical disasters in the future. Series such as *Prehistoric Megastorms*, and *Catastrophe*, for instance, focus on depictions of disasters in deep time, all the way back to the creation of the Earth and the Moon. In the other direction, programs such as *Perfect Disasters* and *Super Comet: After the Impact* imagine the consequences of future, hypothetical disaster events. Some programs have even gone beyond the hypothetical and constructed entirely contrived scenarios, such as the sudden disappearance of all humans that provides the premise for *Life After People* and *Aftermath: Population Zero*. Given the potential range of content and approaches to representing that content available to factual entertainment programme-makers, the predominance of any patterns of representational choices across a selection of factual entertainment programs are potentially significant in terms of this category of media content’s contribution to the mediation and framing of

environmental risk and natural disasters particularly in terms of representing these as entertainment.

Analytical Frameworks

A focus on factual entertainment television creates some potential analytical challenges. As indicated, a common tool used for the analysis of environmental risk and disasters in the media has been frame analysis. The structures of news reporting suit the dominant schematic definition of a frame offered by Entman (1993) which focuses on the selection and presentation of material “*in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation* for the item described” (p. 52, original emphasis). For studies that have looked at texts beyond the news, however, the picture becomes more complicated, as they tend to develop discrete analytical categories for the individual texts they examine and with references to frames, where made, typically less systematic or couched within news frame analysis techniques or terminology (e.g. Rosteck and Frentz, 2009; Salvador and Norton, 2011). Such studies have tended to use what has been referred to as a “hermeneutic approach” which involves “providing an interpretative account of media texts linking up frames with broader cultural elements” (Matthes and Kohring, 2008, p. 259). To an extent this is necessary because of the greater range of representational techniques that are employed by fiction films or documentaries when compared to the news. For instance, whilst both nominally documentaries, the illustrated lecture format of *An Inconvenient Truth* is radically different from the poetic stylisation of *When the Levees Broke*.

A potential risk of this approach is a lack of precision in “naming the criteria for the identification of frames” (Matthes and Kohring, 2008, p. 260) and where studies have concentrated on individual texts it is possible for the frames identified to be essentially unique to that text, or to the piece of research on that text. It is important therefore to properly position analysis of environmental risk and natural disaster frames in factual entertainment television within a clear set of analytical criteria. One way to do this is to concentrate analysis on what are referred to as “generic frames” (Callaghan and Schnell, 2005, p. 5) and “culturally embedded frames” (Van Gorp, 2010, p. 85). These frame categories concentrate on “common cultural themes” (van Gorp, 2010, p. 86) and “narrative device[s]” (Callaghan and Schnell, 2005, p. 5) that are not event- or issue-specific, such as representing participants as “villain”, “victim” or “hero” (van Gorp, 2010, p. 86). In other words these are not components unique to individual texts or individual researchers, and thus can be clearly identified across a range of texts. Campbell’s (2009) study of paleoimagery in factual entertainment television programs about extinct animals, such as *Walking With Dinosaurs* (UK, 1999), for instance, showed how such programs draw heavily on long-standing generic frames for their CGI representations of prehistoric animals, such as the iconography and structure of antediluvian imagery and the animal fable. Such analyses are possible, therefore, when care is taken to ground the qualitative frame analysis within the clear cultural and generic representational traditions surrounding the subject material under consideration.

Looking across the cultural and generic representational traditions in the depictions of environmental risk and natural disasters, as indicated in the introduction, provides a clear set of potential frame devices that might be utilised by factual entertainment television

programmes, ranging from long standing perceptual responses to “Nature” and the “Environment” to particular representational traditions in news, fiction films, and documentary. A consistent feature in environmental discourses has been the evocation and adaptation of mythic narratives, sometimes even referred to as mythic frames (Buell, 2010; Salvador and Norton, 2011). A long standing, and problematic, frame regarding the environment has been seeing it as a *sublime* space of pristine beauty, awe, and wonder (Rosteck and Frentz, 2009, p. 1; Wheatley, 2011, p. 244) but also as something separate from humanity (Lakoff, 2010, p. 76). Within that frame, natural disasters have had a distinct role. Even today, natural disasters remain highly unpredictable, and as Adams suggests, societies “do not respond blankly to uncertainty. [They] impose meaning(s) upon it.” (2003, p. 92). A long-standing cultural interpretation of natural disasters has been to see them as “acts of God” (Williams, 2008, p. 1120), often met with a high level of fatalism (Adams, 2003, pp. 98-9).

Environmental advocacy has been identified as drawing directly on these mythical narratives of impending apocalypses, and offering “Jeremiad” accounts as well, whereby the imminent apocalypse is structured in terms of identifying actions responsible for invoking it, and possible “right” actions to avoid it (Buell, 2010; Salvador and Norton 2011). When used in advocacy these frames present “human agency as both subject to the power of nature and effectual at intervening in nature” (Salvador and Norton, 2011, p. 49). For example, Rosteck and Frentz (2009) identify *An Inconvenient Truth* as clearly containing a Jeremiad structure with calls to action to avert the impending apocalypse structurally underpinned by presenting Al Gore as the archetypal “hero” of the monomyth, whose life story is a template for audiences to follow.

When it comes to *fictional* representations of the environmental apocalypse, however, a clear difference is evident. Salvador and Norton's critique of *The Day After Tomorrow* (TDAT), one of the few disaster movies to explicitly utilise global warming as a plot device, argues that human capacity to avert or avoid the apocalypse is removed in the film (2011). They argue that:

Whereas in ancient and biblical tales, humans were subject to the power and principles of the gods or God; in the secularized version of the flood myth expressed in TDAT, humans are subject to the power and principles of nature. (p. 51)

In their view the film potentially “enfeebles environmental advocacy” as it offers a representation of environmental risk where “there is little left to do but wait for and survive the purification brought by nature’s retribution” (p. 60). Kakoudaki’s discussion of disaster movies of the 1990s suggests that this is a typical generic characteristic of disaster movies (2002). Referring explicitly to films featuring disasters involving natural hazards, such as *Twister* (USA, 1995), *Volcano* and *Dante’s Peak* (both USA, 1997), Kakoudaki (2002) argues that nature across these films is presented as an “agent of destruction [...] outside of human agency or responsibility” (p. 120). She states that “human *responsibility*, thus, is removed from the main encounter of the films and becomes *response* [...] As a result, the new apocalyptic films are not about ethics or choice in averting disaster” (p. 121, original emphasis).

Here then, in the clear differentiation between the call to action of an environmental advocacy documentary such as *An Inconvenient Truth*, and the passive experience of disaster movies like *The Day After Tomorrow*, lies a question over how factual entertainment programs attitudinally represent risk and disaster. Do they offer a normative

attitudinal position, placing human agency and responsibility at the core of their representations of disaster, what could be called a “Jeremiad frame”, or do they construct disasters as intrinsically “natural” events to be endured by people omitting any judgement on human responsibility or agency, what could be called a “Fatalistic frame”, or other frames entirely?

A second potential culturally-embedded/generic frame that could be appraised for its presence and nature in factual entertainment television relates to the depictions and role of human participants in the programmes. Here again there are precedents from other media representations of disasters which allow for comparison and analysis. As suggested earlier, a key criticism of news media reporting of disasters has been their tendency to bracket human participants into roles as heroes, villains and victims, reducing disasters into “anecdotic stories” that are focused on individuals (Vasterman et al, 2005, p. 108).

Beyond the news, the picture is more complicated. Button (2002) argues that the framing of disasters in terms of individuals also featured in the best-selling non-fiction book *A Civil Action* (p. 147). Although Button’s focal text concerns a technological disaster (a pollution scandal in the USA) his critique of the framing of the event in the book’s narrative usefully sums up the problem of a focus on individuals:

First, it displaces any systemic account of the disaster and its causes because it relies on anecdotal, individualistic accounts that decontextualize the larger socio-political conditions in which the tragedy occurred. Second, narrative discourse makes individuals appear to be passive victims rather than active agents struggling politically to redefine and reframe official accounts of the disaster. (p. 147)

Button says such media framing occurs because of ‘the media’s tendency to rely disproportionately on official accounts of the disaster while dislocating the voices of the victims and their families’ (p. 147).

Alternatively, Weik Von Mossner’s analysis of *When the Levees Broke* affirms the typical tendency of media accounts to marginalise victims and take them out of their social context but praises Lee’s film’s distinctiveness in its “efforts to humanize and individualize the previously anonymous mass of ‘hurricane victims’” (2011, p. 160). Weik Von Mossner states that Lee “frames his story differently” from other documentary accounts of Hurricane Katrina (p. 150). Lee’s film contains no authoritative narration or presenter, with dialogue coming from the people of New Orleans talking about their experiences, and in doing so Weik von Mossner argues that this particular film does place the socio-political context of Hurricane Katrina’s victims’ views and experiences into the narrative (pp. 160-1).

In disaster movies meanwhile, the human protagonists are routinely constructed as heroes, villains and victims though here there’s a tendency to quite didactically position them within distinctive socio-political roles (Keane, 2006; Kakoudaki, 2002). Keane (2006) notes, for instance, that the “typical disaster movie’s characters are distinguished by their jobs, status or standing in society” and through the fates of the various characters in the narrative disaster movies provide a kind of social commentary, reflecting the “ideological signs of the times in which they are made” (p. 14). Kakoudaki (2002) argues that:

The spectacular moments that “we” as (an imagined collectivity of) the characters in the film and “we” as the audience see together thus negotiate a number of complex

possibilities for what is safe, what is dangerous, and what is desired as a utopian topos. (p. 144)

This offers a second question regarding factual entertainment television programs on natural disasters in terms of how they frame human protagonists, particularly the questions of whether or not protagonists are placed into socio-political contexts, whether or not disaster victims are given a voice (and, if so, what kind of voice), and whether or not such programs frame participants as heroes and villains?

Alongside the attitudinal framing and the framing of protagonists a final generic framing element that can be analysed here relates to visual framing of disasters. Critiques of news media reporting, as indicated, tend to identify it as concentrating on specific disaster events (Kitzinger, 1999, p. 62). Even in news reporting on long term risks like climate change, spectacular imagery from natural disaster events features prominently (Lester and Cottle, 2009). As suggested, factual entertainment television is not limited to event-oriented representation of risks and disasters and is potentially capable of covering any and all of the phases of disasters: preparedness, impact, response, recovery and mitigation (Perez-Lugo, 2004, p. 212). The choices of the phases of disaster depicted in these programs will indicate whether, for instance, the “weather porn” label implying a voyeuristic emphasis on imagery of the impact phase akin to disaster movies is valid or not. Similarly, the depiction of the types of *capital* resources destroyed, including natural (as in environment impacts), human (loss of life), social (impacts on communities’ infrastructure) and built (cities etc.) capital, allows for comparison with news media in particular, seen as tending to de-emphasize natural capital compared to the other types of capital (Miles and Morse, 2007, p. 372).

Natural Disaster Frames in Factual Entertainment Television

The following analysis is based on a necessarily purposive sample of programs and series on natural disasters (primarily depicting natural hazards and extreme weather) broadcast in the 2000s and commercially available on DVD at the time of selection (2009-10). The widespread popularity of such programs in the last decade enabled a selection to be made across the globally dominant producers of factual entertainment television in the English language, including examples from the BBC, Discovery, National Geographic and the Weather Channel, amongst others. The selection included some of the texts dubbed “weather porn” by journalists, and also included examples of programs concerning prehistoric disasters, recent disasters, and hypothetical future disasters. The sample also included examples of programs that ranged from those using conventional documentary techniques to those relying predominantly on dramatic reconstructions and CGI. Despite the eclectic mix of programmes, the analysis suggests that they contain a broadly consistent pattern of distinctive representational frames of natural disasters and environmental risks.

Attitudinal Framing: “Nature Will Have the Last Say”

Thinking first about the attitudinal frames offered by these programmes, there is an apparent pattern of fatalistic framing of natural hazard and extreme weather events as “natural” disasters. This is evident in a couple of key ways. First, there is a marginalisation or even complete omission of discussion of risk likelihood. Whether dealing with recent disaster events, disasters in prehistory, or even possible future disasters, the programs treat disasters essentially as inevitable. In the *Raging Planet* episode

Fireballs from Space, for example, the narration refers to meteorite impacts in this contradictory way “the chance of getting hit by one is rare but the Earth is a target”, whilst in the *Restless Earth* episode *Asteroids: Deadly Impact*, the narration’s closing sentence about impacts is “the question is not if but when”. In *Super Comet: After the Impact*, which imagines the consequences of a future comet impact akin to the one that wiped out the dinosaurs, the program simply begins with a large comet on its way to hit the Earth, with no discussion of how likely this might be. Even where likelihood is expressed, the emphasis remains firmly on depicting confirmatory cases rather than likelihood. In the *Savage Planet* episode *Deadly Skies*, for example, the fatality rate of lightning strikes is mentioned in passing as 30 per cent but the emphasis is clearly on confirmatory cases and eyewitness accounts of fatal lightning strikes. *Perfect Disasters* stretches risk probabilities in constructing hypothetical scenarios, such as a theoretically possible F6 super-tornado hitting Dallas, whilst *Life After People* and *Aftermath: Population Zero* break with any link to risk likelihood in their scenarios of a suddenly entirely depopulated Earth (the cause of this is left undisclosed by either programme). The emphasis in these programs then is not on questions of disaster risk, as disasters are constructed as imminent and inevitable.

Second and related to this, alongside the marginalisation of likelihood is a parallel marginalisation or omission of notions of human agency in terms of preparedness, response, or mitigation. Where attempts at these are presented they are typically presented as ineffectual. In the programs offering hypothetical disasters the absence of the capacity for mitigating them is notable, with failed attempts to disrupt an imminent hurricane in *Superstorm*, and in *Super Comet: After the Impact* there is a brief early sequence showing a failed attempt to push it off course with a nuclear bomb. Some programs addressing actual

recent disaster events focus at least part, indeed sometimes all, of their narratives around particular scientists, talking about their biographies, their motives, and their professional achievements and dedication but here too the limits of agency are present. The *Restless Earth* episodes *Asteroids: Deadly Impact*, and *Volcano: Nature's Inferno* both focus on intrepid scientists, Gene Shoemaker and his wife, co-discoverers of the Shoemaker-Levy 9 comet that impacted with Jupiter in 1994 in the former program, and Maurice and Katia Krafft, renowned for filming volcanoes, who died in a pyroclastic flow on Mount Unzen in Japan in 1991 in the latter program. In the *Raging Planet* episode *Volcanoes*, husband and wife volcanologist team Peter and Patty Hall are shown debating the limits of their influence on efforts to protect the Ecuadorian town of Baños from the Tungurahua volcano. Peter Hall states in the program that “an eruption’s going to come no matter what and I don’t think man will ever be able to intervene in that”. The depiction of scientists is discussed further below, but the key point in terms of the attitudinal position of these programs is that this combination of an omission or marginalisation of questions of risk likelihood and of risk mitigation signals a more fundamental omission in these texts- the notion of human agency in terms of responsibility in relation to disasters framed as “natural”. The suppression of controversy is not an un-common feature of science documentary (León, 1999, p. 77), relating often to the tensions between requirements for representing scientific debate and narrative coherence in the documentary text. Nonetheless, it is striking in programs made in the 2000s dealing with natural disasters that discussion of possible human contributions to disaster likelihood and wider related issues such as climate change is almost entirely absent. The persistent position offered by these factual entertainment programs is summed up neatly by the tagline for the series *Global*

Catastrophe which states “nature will have the last say”, thus constructing environmental risk and natural disasters as instances of a kind secular apocalypse outside of human responsibility or control.

Framing People: “Start Living It”

Indicative of the fatalistic attitudinal position, there is a noticeably narrow range of protagonists featured across these programs. Alongside the omission of questions of risk, preparedness, mitigation, and responsibility, there is a parallel absence of representative figures from groups responsible for these areas (politicians, rescue organisations etc.)- these programs typically do not position any groups or individuals as “villains”. Instead the notion of disasters occurring within particular socio-political contexts is routinely subordinated by an emphasis on individualised experiential accounts.

The sole group of “official” figures constructed as the voices of authority in these programs are scientists, and their representation occurs in distinctive ways. Many of the programs use a highly conventional science documentary trope- the expert “talking head” shot. Here scientists are depicted outside of the central disaster narrative, interviewed perhaps in an office or laboratory as used in *Prehistoric Megastorms* and *Super Comet: After the Impact*. By physically dislocating them from the disaster imagery the sense of their detachment from the events they are explaining is presented visually in these programs- they are literally “outside” of the disaster events. Some programs vary this technique by conducting talking heads sequences on location, such as the *Ultimate Disaster* episode *Tsunami* with scientists filmed in Hawaii describing the consequences of a possible tsunami on the islands, gesturing to the bay behind them. *Perfect Disasters* and *Life After*

People also use this technique, and whilst these programmes thus embed their experts in recognisable geographical locations, they are still presented as socially-isolated, a single talking head in a geographical space, and are not placed within the disaster scenarios. This visual dislocation of scientists from the events they are describing reinforces a separation of their capacity for *knowledge* of disasters, knowledge which is not contested or challenged by other perspectives, and their capacity for *agency*. Mitigation and responsibility are not the roles offered by the “talking heads” in these programs, who do no more than comment on and explain disasters.

Where programs do feature scientists as active protagonists within disaster events there is a tendency for them to focus more on scientists’ experiences of disaster than on questions of their agency. As mentioned above, programs featuring scientists in the field often include their own comments on the limits of their agency. In the programs that construct disaster scenarios, scientists are often featured as semi-heroic protagonists within dramatized sequences. In *Super Comet: After the Impact* the narration refers to a couple of survivors foregrounding scientific knowledge stating “as scientists they’re among the few who know what comes next”. Interestingly though whilst this privileging of scientists’ knowledge of disasters is utilised in programs featuring dramatized sequences, it provides the basis primarily for a more informed exposition of the immediate experience of disaster. The BBC’s “factual drama” *Supervolcano*, an entirely dramatized text imagining an eruption of the Yellowstone super-volcano, for instance, used the talking head shot as part of its dramatic construction in this way. The whole program is constructed as a series of post-event interviews with the senior scientists (played by actors reading scripts) involved in monitoring Yellowstone, intercut with dramatized sequences of the eruption itself. The

interview sequences, as in conventional documentary, serve to provide some of the scientific explanation of the events unfolding, but they are also used for explicit personal reflection on their feelings during the disaster event.

This emphasis on immediate, individual experiences of disasters creates, in some of the programs, a breaking down of boundaries between “heroic” scientists and “ordinary” disaster survivors and victims. Developing the representation of scientists as intrepid adventurers, *Stormchasers* effectively turns the focus of representing disaster into a dynamic chase narrative, in which a small group of scientists, filmmakers and enthusiasts chase storms and tornados around the USA. The BBC series *Wild Weather* is presented by a journalist, sent to various locations to experience extreme weather conditions, and the ITV series *Nature's Fury* eschewed scientists entirely, featuring professional cameraman Chris Terrill seeking out disaster events in order to capture film of them as they occurred, the central sequences including images of him in the midst of, for instance, hurricane Ike. This focus on individuals’ and small groups’ experience of disasters again largely de-contextualises the disaster events, as they become about the specific protagonists the programs follow, rather than the wider socio-cultural and politico-economic contexts in which disasters occur. Although some of the programs center their narratives on survivors’ and eyewitnesses’ accounts, such as *Storm Stories* and *Full Force Nature*, disaster events are treated as essentially a series of isolated, individualised experiential accounts. In these cases people are given a voice but their experiences are treated largely in isolation from the experiences of others, and not socially-situated. Although such programs thus provide a greater space for the voice of survivors and victims of disasters than the news is regarded as providing, they are positioned in a such a way as to retain a distance between the

individualised experiences and the social context. Immediacy and emotional response is favoured over a politically and socially situated response. This is perhaps most evident in the program *Witness: Katrina* whose innovative and award-winning composition involved editing together video and audio footage, predominantly from camcorders used by New Orleans citizens in the midst of the hurricane, to construct an account of the disaster from the perspective of those experiencing it. Importantly though, in doing this the programme, in stark contrast to *When the Levees Broke*, focuses on that immediate experience and not on wider questions of causes, consequences, responsibility etc. The framing of people in much factual entertainment television on natural disasters then is on personalised experiences of disaster, whether real or imagined, as evidenced in the tagline to *Super Comet: After the Impact* which invited viewers to stop imagining what the extinction of the dinosaurs was like and instead to “start living it”.

Visual Framing: Weather Porn

Factual entertainment programs’ focus on the immediate personal experiences of those caught in imminent and inevitable “natural” disasters is also reflected in their visual framing, with a significant focus on spectacular imagery of the impact phase of disasters and particularly the consequences of disaster impacts on the built environment. Many of the programs contain imagery of disaster impacts in their title sequences, for instance, and this focus on impact is pervasive across programs regardless of whether they are dealing with events in the far historical past in series like *Prehistoric Megastorms* and *Catastrophe*, recent historical events in series and programs like *Full Force Nature* and *Witness: Katrina*, or imagined hypothetical future events in programs like *Superstorm* and *Supervolcano*.

These programs are dominated by imagery of disaster impacts, and immediate aftermaths, and typically the animated sequences in programs imagining future disasters borrow the tropes of disaster news footage such as aerial wide-shots of devastation. A key difference to the use of impact imagery in the news, however, is the complete absence of associated ‘cause images’ (Lester and Cottle, 2009, p. 928) such as smoke-stacks and power stations. These programs thus omit human agency both narratively *and* visually in their representation of “natural” disasters.

The predominant imagery of disasters across these programs consists of images of the destruction of built capital- cities and buildings in the process of being destroyed or in ruins in the immediate aftermath of disasters. In programs depicting prehistoric disasters the hypothetical consequences of the ancient disaster on a modern built environment is often depicted. *Catastrophe*, a series about global disasters in Earth’s prehistory routinely included an image of disasters as if occurring across modern day London, such as an episode on the “snowball Earth” era. Where future disasters are imagined, again scenes of destruction of major cities and iconic landmarks predominate. In *Super Comet: After the Impact*, for example, Houston is shown being destroyed by a fireball generated by the impacting comet, and New York is shown being drowned by a tsunami generated by the impact. Similarly, in *Superstorm*, New York is again the target, this time of a major hurricane blown off course up the east coast of the USA. In *Life after People* and *Aftermath: Population Zero*, iconic landmarks like the Eiffel Tower are depicted decaying and collapsing over time without humans around to maintain them. To reinforce the sense that such imagery is more consonant with disaster movies than with documentary, the

Statue of Liberty is repeatedly featured as being a symbolic victim of disaster in these programs, just as it regularly has been in fiction films (like *The Day After Tomorrow*).

With programs using archival footage of actual disaster events, there is often also imagery, sometimes in combination with images of built capital destruction, of human capital destruction i.e. dying and dead people, but images of the dead are relatively rare. Programs like the *Raging Planet* episode *Volcanoes* and the *Restless Earth* episode *Volcano: Nature's Inferno* include images of charred bodies of those caught and killed by pyroclastic flows during volcanic eruptions, for instance. However, the programs that dramatize and animate disasters almost completely avoid the depiction of dead bodies. In *Perfect Disasters*, across six episodes there is only one partial depiction of a dead body in its dramatized sequences, and in that case it is of the arm of an arsonist constructed as responsible for starting wildfires in Sydney. In *Super Comet: After the Impact*, similarly, there is only one brief image of a dead body in CGI, slumped on a bridge over the Seine in Paris, succumbing to the post-impact period of freezing conditions as the sun is blocked out by a global ash-cloud. Such programs often state through narration, or obliquely through characters in the dramatized sequences, estimations of death tolls, but these are systematically excluded from visual depiction. Precisely why this is the case is unclear. It may simply be a feature of making programs that need the minimum amount of repurposing for sale to the widest range of international markets (and schedules) by avoiding overstepping the boundaries of the strictest taste and decency broadcasting codes, rather than a deliberately aesthetic decision. The voyeuristic spectacle of such programmes' evident weather porn "money shots" of the destruction of built capital might also be undermined by images of the dead. The concentration on the visual depictions of disaster

survivors could be seen, alternatively, as consistent with the underlying apocalyptic attitudinal framing of natural disasters offered by these programs. The programs may present natural disasters as imminent and unstoppable but also they show them as survivable, and thus open to enjoyment as vicarious visual spectacle.

Conclusion

The producers of factual entertainment television programs have found a variety of innovative ways to blend elements of science documentary with entertainment genres, from turning engineering into a gameshow in *Junkyard Wars* to enlivening archeology in the race-against-time format of *Time Team*, so the attempt to make the communication of environmental risks entertaining is not, in and of itself, necessarily problematic. The ways in which the programs considered here attempt to turn environmental risk and natural disasters into entertainment, however, do raise concerns about the nature and quality of the communication of environmental risk. These programs, often drawing on dramatised and computer-generated sequences, in many ways reproduce and extend existing problematic representational frames of the environment seen in other media forms. An emphasis on visual spectacle concentrating on disaster impact imagery is highly prevalent in these programs, consonant with the spectacle of disaster identified in the news but crucially without the accompanying causal imagery linking disasters to human agency. Instead, more disaster movie style impact-focused imagery, including visual constructions of prehistoric and future disasters, adds to the validity of the pejorative “weather porn” label for such programs. The depiction of people similarly reproduces the problematic media representation of disaster participants as socially de-contextualised individuals, though

these programs arguably de-contextualise people even more fully than either the news or disaster movies, through the omission of “villains” from the programs’ narratives. The absence of “villains” additionally shows how these programs omit questions of human agency in and responsibility for environmental risks both visually and narratively, with natural hazards and extreme weather events being represented as entirely “natural” disasters. These programs therefore depict a vision of “natural” disaster as spectacle:

But this vision is not meant to shock us into our senses and make us seek alternatives. Instead it is [...] directed at transforming apocalypse into exciting entertainment for the multitudes. (Buell, 2010, p. 31)

Their representations of disasters are not warnings intended as environmental advocacy, or a call to action, but rather offer a form of vicarious pleasure, a version of seeing nature as sublime but the sublime in the sense of the pleasure of terror in the face of the power of nature (Wheatley, 2011, p. 244). As such, if the media are to be regarded as playing a ‘constitutive’ role in the social construction of disasters (Pantti et al., 2012, p. 17) then factual entertainment television programs have to be incorporated into attempts to make sense of the circuit of communication surrounding the visibility and construction of environmental risks in the media.

[1] The series and individual programs considered here were: BBC (UK)- *Wild Weather* (2002), *Supervolcano* (2005), *Superstorm* (2007); Channel 4 (UK)- *Catastrophe* (2008); Channel 5 (UK)- *Perfect Disasters* (2006); Discovery Communications (USA)- *Super Comet: After the Impact* (2007), *Raging Planet* (2008), *Stormchasers* (2007); The History Channel (USA)- *Global Catastrophe* (2007), *Prehistoric Megastorms* (2008), *Life After People* (2008-10); ITV (UK)- *Savage Planet* (2000), *Nature's Fury* (2009)*; National Geographic Television (USA)- *Restless Earth Collection* (2003), *Ultimate Disaster* (2006)*, *Aftermath: Population Zero* (2008), *Witness: Katrina* (2010); The Weather Channel (USA): *Storm Stories* (2003-9), *Full Force Nature* (2006). (* These programs were based on off-air recordings, all the rest were based on DVD releases.)

[2] Generally-speaking the 'money shot' is a shot where it is overt that the production expenses have been centered on producing that image, in pornography it refers to the moment of male ejaculation.

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