

'Ten years to prevent catastrophe'?
Discourses of climate change and international
development in the UK press

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Abstract

The science of climate change is full of uncertainty, but the greater vulnerability of poor countries to the impacts of climate change is one aspect that is widely acknowledged. The UK government is taking a lead in international action to instigate mitigation measures and assist developing countries to adapt, for which it needs the support of the public. The media plays a critical role in influencing public opinion, yet there has been no analysis of media portrayals of climate change and international development. This paper uses Dryzek's (2005) 'components' approach to discourse analysis to explore the media construction of climate change and development. Eight discourses were identified from these articles based on the entities recognised, assumptions about natural relationships, agents and their motives, rhetorical devices and normative judgements. They showed a wide range of opinions regarding the impacts of climate change on development and the appropriate action to be taken. Discourses concerned about likely severe impacts have dominated coverage in the Guardian and the Independent since 1997, and in all papers since 2006; previously discourses proposing that climate change was a low development priority had formed the coverage in the Times and the Telegraph. Overall, results demonstrate media perceptions of a rising sense of an impending catastrophe for a developing world that will be defenceless without the help of the West. This has implications for public understanding of, and government responses to, climate change and international development.

1. Introduction

Climate change is big news, bigger news than ever before. Coverage of climate change in the United Kingdom (UK) 'quality' newspapers has continuously risen since 2004 to a level that is over double that of any previous peaks (Boykoff and Rajan, 2007). Yet climate change is still a contested issue in all its dimensions – scientific, political, economic and social (Carvalho, 2003). The mass media is a critical arena for this debate, and an important source of climate change information for the public (Bell, 1994; Wilson, 2000). What is written in the media influences public perceptions and thence policy: it matters. Clearly this is what motivated a coalition headed by the American Petroleum Institute to invest US\$600,000 in 1998 in a campaign aiming to increase the volume of US news coverage questioning the prevailing climate science (Cushman, *New York Times*, 26.4.98).

At the same time, there has been rising scientific and political concern about the potential impacts of climate change on international development, to an extent mirrored by a similar increase in media interest. This concern was epitomised in 2004 when a new coalition of environment and development charities and institutes came together to release a report warning that urgent action was needed to combat climate change if human development gains were not to go 'Up in Smoke' (Simms et al., 2004). The key issues are reflected in the academic literature: adaptation and vulnerability of the poor (e.g. Adger et al., 2003; Parry et al., 2001), climate-related disasters (e.g. Brooks and Adger, 2003; Schipper and

Pelling, 2006), and mitigation strategies for developing countries (e.g. Chandler et al., 2002; Davidson et al., 2003).

There is also a growing literature investigating climate change and the media. One theme has focused on identifying and theorizing the reasons behind the attention cycles of media focus on climate change (Brossard et al., 2004; McComas and Shanahan, 1999; Trumbo, 1996). A significant strand has looked at what influences media construction of climate change (Boykoff and Rajan, 2007; Dispensa and Brulle, 2003; McManus, 2000), including particular investigations into the influence of science (Taylor and Nathan, 2002), political actors (Carvalho, 2005), newspaper ideologies (Carvalho, 2005; 2007), the sources used for articles (Antilla, 2005; Mormont and Dasnoy, 1995), reporters' knowledge about climate change (Wilson, 2000) and journalistic norms (Boykoff and Boykoff, 2004; in press). More specifically, some have investigated the influence and translation of scientific uncertainty within the media (Ladle et al., 2005; Zehr, 2000). Others have looked at the accuracy of the media discourse on climate change (Bell, 1994), and how it relates to scientific (Nissani, 1999) and political representations (Weingart et al., 2000). Research has also investigated how the media discourse has affected public perceptions and understanding of climate change and climate risk (Carvalho and Burgess, 2005; Corbett and Durfee, 2004; Smith, 2005).

There have been no previous analyses focussing on media portrayals of climate change and international development, perhaps because most of the media coverage appears to concentrate on domestic issues. Yet the science shows that it

is the poor countries of the world that are most vulnerable to climate change impacts (Parry et al., 2007), and one of the current policy imperatives is to involve high emitting, rapidly industrialising developing nations in international agreements. Furthermore, the UK government has chosen to take a lead in international action on climate change, both in terms of development assistance and through galvanising international initiatives via bodies such as the G8 and the European Union (EU). If the government is to prove effective in this role it needs the support of the public, and it is therefore important to understand how the UK public are informed about climate change and international development.

This paper follows the vast majority of research into climate change and the media in using newspapers as the focus of analysis, both because of their importance within the overall media discourse, and the relative ease of analysis. Although the body of research includes analyses of the press in Australia (McManus, 2000), Belgium (Mormont and Dasnoy, 1995), Finland (Dispensa and Brulle, 2003), France (Brossard et al., 2004), Germany (Weingart et al., 2000) and New Zealand (Bell, 1994), much of the work has focussed on the press of the UK and the United States (US). This study follows this bias in choosing to analyse the UK press, as this was most accessible and familiar. It also follows most of the previous work in using national newspapers, felt to be the most interesting and relevant to research.

In addition, there has been little attempt to classify different climate change discourses within the media in terms of their varying components such as

language, assumptions and contentions. The research detailed above has largely tackled the media discourse as a whole. The only work that has verged on classifying discourses is a recent report for the Institute for Public Policy Research (IPPR, 2006), which looked at discourses within the mass media and more widely within society, in order to understand how best to convey the climate change ‘story’ to the public. This identified 11 ‘repertoires’ regarding climate change based on shared ‘systems of language’ (ibid.: 12), grouped into three overarching repertoires based on their understanding of the threat of climate change.

This research differs from the IPPR research, not only in focussing on climate change *and development* discourses, rather than just climate change discourses, but also in pinning down their content more precisely by using the discourse analysis approach of Dryzek (2005). Dryzek assessed the broad sweep of environmental discourses, classifying them in terms of: the basic entities constructed, assumptions about natural relationships, agents and their motives, and rhetorical devices. This paper demonstrates that this approach to discourse analysis can be usefully adopted for more specific topics such as climate change and development in the media. It is the contention of this research that the approach enables a more nuanced understanding of the portrayal of the issue within the media, and gives a less subjective basis from which to investigate the influences on that portrayal, and understand how it might affect understanding and discourses in other spheres of public life.

The main research questions are therefore: What are the different discourses on climate change and international development constructed and represented by the British quality newspapers? Where and when are these discourses presented? How do the findings inform understanding of the influences on climate change portrayal in the press? What do the results suggest about general media perceptions of climate change and development?

2. Methodology

2.1 Analytical approach

The term ‘discourse’ has many definitions (Apthorpe and Gasper, 1996); here it is understood as ‘a shared meaning of a phenomenon’ (Adger et al., 2001: 683), consistent with Dryzek’s idea of a ‘shared way of apprehending the world’ (2005: 8). In terms of this research, this means shared ways of understanding climate change and international development, following the key issues outlined in the introduction.

A discourse approach recognises the importance of language in shaping our understanding of the world and our interactions within it. Each discourse is thus embedded within its own language, whilst also resting on shared assumptions and contentions about the world (Dryzek, 2005). The narrative aspects of discourses means that they can also be portrayed as having heroes, villains and victims (Adger et al., 2001), and these archetypes are reflected in the analyses that follow.

Similarly, discourse analysis is subject to a diverse array of interpretations (Hajer, 1995). Different approaches are seen as fitting different purposes, with none claiming general veracity, and presuppose varying views of language and the important questions to ask of a text (Gee, 1999). Fairclough (2003) proposes two general forms of discourse analysis: ‘Foucauldian’, which pays little attention to linguistic features of the text and engages instead with social theoretical issues, and ‘Critical Discourse Analysis’, which advances a close linguistic analysis of texts.

In drawing heavily upon Dryzek's approach to environmental discourses (2005), the method adopted here draws upon both these ideas but avoids the narrowness of strict linguistic analysis and the broad generalisations that characterise ideological analysis (MacDonald, 2003). Following on from the stated understanding of discourse, discourse analysis is taken to mean an attempt to identify the key components of different discourses, e.g. the language used, the common assumptions, or others.

The approach also borrows from that adopted by Carvalho (2000) for the analysis of media texts. While aspects of her methodology are similar to that of Dryzek, she also explicitly outlines normative judgements, aspects which seem pertinent to this topic. The 'surface descriptors' of the articles, such as length and title, are also deemed important. Together, these approaches form the analytical framework outlined in Box 2.1.

Box 2.1. Analytical framework for discourse analysis of newspaper articles

1. Surface descriptors (newspaper, author, date, page, section, word count, title)
2. Basic entities recognised or constructed
3. Assumptions about natural relationships
4. Agents and their motives
5. Key metaphors and other rhetorical devices
6. Normative judgements

Adapted from Dryzek (2005) and Carvalho (2000)

It should be noted, however, that the approach adopted departs somewhat from that of Dryzek's analyses. He searches for the most fundamental components of discourses, such as the relationship between man and nature. This seems most appropriate for the broad platform of universal environmental discourses that he

addresses. Here, the analysis is of a much more specific issue; consequently the discourse components identified are less generalised. In particular, the understanding of natural relationships slightly differs: rather than just the relationships that are assumed normal between different entities, it is taken to also include ideas about what the effect of climate change will be, and what solutions will work.

This approach also represents a significant departure from most previous efforts taken to understand the construction of climate change in the media and the influences on that construction. In investigating specific influences, researchers have frequently adopted a somewhat deductive research process: identify a possible factor influencing newspaper coverage of climate change, perform a discourse analysis of climate change in the media with this in mind, produce results showing that factor's influence on coverage.

It is suggested here that the method of discourse analysis adopted for this research benefits from being more inductive. Instead of identifying potential influencing factors in advance, the first step lies in laying out the fundamental components of different discourses. Once discrete discourses have been identified, simple descriptive statistics can be used to analyse where and when they were represented. Investigation into the factors influencing the construction of the different discourses can then be pursued from a more nuanced and less subjective basis. This method is therefore consistent with MacDonald's (2003) approach to

media discourse, which embarks with openness as to the discourse patterns that may emerge from the reading of media texts.

2.2 Selecting newspaper articles for analysis

Searches for articles were performed using ProQuest online search engine for the period 30 June 1997 to 30 June 2007. This period was selected as it covered a number of important climate change related events, from the formulation of the Kyoto Protocol to the publishing of the latest Intergovernmental Panel on Climate Change (IPCC) reports; it was hoped that there would be an appropriate number of articles for analysis; it would allow an assessment of how the representation of discourses had changed over time; and it was thought that the most recent coverage would be the most interesting to research.

The papers covered were The Daily Telegraph, The Times, The Guardian, The Independent, and all associated Sunday papers. Carvalho (2005; 2007) analysed articles from the last three of these papers, arguing that they represented the cross-spectrum of political ideologies, set the agenda for other papers, and that the debate on climate change was excessively simplified or excluded in other papers. Her omission of the Daily Telegraph coverage seemed to negate her proposition that the full political spectrum was covered, so this was included for analysis within this research. While it seems likely that the climate change debate is simplified or largely excluded in the tabloids, it would still be interesting to analyse the discourses present in the Financial Times, the mid-market and tabloid

press. These, however, were excluded in this research to keep the size of the database at an easily manageable level.

Articles used included news articles, editorials, opinion pieces, comment and analysis. Letters to the newspaper were excluded as these were often too short for worthwhile analysis, and were felt to be insignificant in terms of the discourses being represented and constructed in the newspapers.

The searches performed, along with the number of results for each and the number of articles used, are presented in Box 2.2. Terms were searched for within the document text. The aim was to find articles with a central focus on climate change and development issues, and together, the searches represent a thorough trawl for relevant articles. Initial selection was based upon the title of the article and, if necessary, a skim-read of the first few paragraphs. All articles from these initial selections were subsequently read closely and discarded if found not to focus on climate change and development. This process resulted in a database of 158 articles.

2.3 Analysing articles and creating discourses

Each selected article was analysed using the framework outlined in Box 2.1. Aspects of each article relevant to the different categories in the framework were noted in this initial analysis. Background reading of climate change and development papers, Dryzek's book and previous research on media and climate

change was useful in signposting potential discourse components and differences between competing discourses.

Box 2.2. Searches performed in ProQuest, including Boolean operators (all between 30/6/97 and 30/6/07, and searching for terms within the document text)

1: climate change OR global warming AND developing countr* OR developing nation* (1323 results, 111 used)

2: climate change OR global warming AND poor countr* AND NOT developing countr* AND NOT developing nation* (219 results, 19 used)

3: climate change OR global warming AND poverty AND NOT poor countr* AND NOT developing countr* AND NOT developing nation* (1427 results, 14 used)

4: climate change OR global warming AND poor nation AND NOT poverty AND NOT poor countr* AND NOT developing countr* AND NOT developing nation* (20 results, 1 used)

5: climate change OR global warming AND poor world AND NOT poverty AND NOT poor countr* AND NOT developing countr* AND NOT developing nation* (10 results, 1 used)

6: climate change OR global warming AND developing world AND NOT poverty AND NOT poor countr* AND NOT developing countr* AND NOT developing nation* (304 results, 12 used)

The next step was to construct overarching discourses and to place each article within a discourse. Preliminary components for the different discourses were laid out using the analytical framework in Box 2.2, though without the surface descriptors. The components of each article analysis were either incorporated into existing discourses or used to form the basis for a new discourse. The eight discourses were then more precisely defined with reference to the article analyses. Each article was assessed once more to verify that it conformed to its selected overarching discourse. Finally, simple descriptive statistics were used to aid examination of the influences on discourse formulation and newspaper coverage.

It was sometimes difficult to place articles within a particular discourse, notably when they contained components from different discourses. When this occurred, consideration was given to the main message and the most important components of that article and each discourse. Additionally, if articles showed through their framing that they disagreed with opinions they printed, this was still counted as an effort to give space to this alternative discourse. Ten articles were felt to not conform to any particular discourse and were therefore left unclassified. Inevitably, however, the creation of discourses and particularly the placement of borderline articles within discourses were to some extent subjective.

3. Results: characterising the different discourses

Five general positions regarding climate change and international development can be identified from within the broad spectrum of discourses present in the UK quality press. The first position views climate change as beneficial for development, a position which all the other positions oppose. The second position affirms that climate change is a low development priority and it will be better to deal with it as it occurs. A third position suggests that the key to preventing serious consequences for development is mitigation, though the conforming discourses differ in their understanding of which countries should take action and who is to blame for stalled negotiations. Next comes a set of crisis narratives that insist climate change will have disastrous impacts on development, but differ in how those consequences are represented and the appropriate solutions suggested. A final position holds that tackling climate change is an opportunity to achieve clean and sustainable development for the poor. The positions and associated discourse are outlined in Table 3.1.

Table 3.1 Five positions and associated discourses regarding climate change and development in the quality newspapers

Climate change will be beneficial	Other development issues should be tackled first	Mitigation is the key	A crisis, climate change must be tackled urgently	Overcoming climate change can help the poor
<i>Optimism</i>	<i>Rationalism</i>	<i>Ethical mitigation</i>	<i>Disaster strikes</i>	<i>Opportunity</i>
		<i>Self-righteous mitigation</i>	<i>Potential catastrophe</i>	
			<i>Crisis</i>	

The various discourses are described below. Each discourse is introduced through a brief outline of the basic storyline, which is then followed by a list of some key

quotes, often taken from article headlines, and a summary of the discourse components.

3.1 Optimism: Climate change will be beneficial

Optimism differs from all the other discourses by viewing climate change as no problem for development, in fact, if anything, it is seen to be beneficial. Most climate predictions and their likely effects are viewed with scepticism and climate scientists are seen as doom-mongers; instead authority is given either to the author's views or scientists that support the discourse of future benefits. This optimism is partly based on the perceived benefits that past warmer climate episodes have brought.

As climate change is going to be beneficial, there is no need to do anything to combat it. The possibility of future problems is broached, but at the same time dismissed by borrowing from the discourse of *rationalism* in suggesting that we will have no trouble in dealing with them as they occur, and that we should be concentrating on the current poor rather than the future rich.

Box 3.1a Some key quotes associated with *optimism*

- 'another group of academics has begun fighting to have its voice heard....They have found that a hotter planet brings with it many benefits, and that humans can adapt perfectly well to it.' (Matthews, Telegraph, 12.6.05)
- 'The world is in much better shape than this doomsday scenario paints....If climatologists can't get the present right, how can we trust them with the future?' (Wigmore, Times, 20.2.01)
- 'History shows it will lead to great benefits for the human race and the environment' (Avery, Guardian, 15.5.99)

Box 3.1b Discourse analysis of *optimism*

1. Basic entities recognised or constructed

- Climate predictions not the real world: Climate Change (CC) science very uncertain
- Natural climatic variability
- Past warm climatic episodes produced benefits for humans
- Authority to scientists predicting beneficial CC effects

2. Assumptions about natural relationships

- Past climatic episodes more reliable indicators of future effects than models
- CC will be beneficial overall: food production and habitable land area increase
- Human ingenuity will always overcome any environmental problems

3. Agents and their motives

- Developed countries will definitely benefit, maybe also developing countries
- Only losers will be wildlife and very low-lying countries
- Doom-mongering climate scientists going beyond their remit

4. Key metaphors and other rhetorical devices

- Current weather forecasts wrong, so unlikely that CC predictions are right
- Reassurance and optimism
- ‘The Little Optimum’ (1100-1300 AD)

5. Normative judgements

- We don’t need to worry about CC so we shouldn’t do anything to combat it

3.2 Rationalism: Other development issues are more important, we should deal with climate change as it occurs

Although *rationalism* accepts that climate change could well cause problems, even severe ones in the developing world, it differs from the discourses that follow by claiming that it is a low development priority, and that attempting to tackle it directly through mitigation and/or adaptation action is not the answer. Predictions of climate change impacts are very uncertain so it is difficult to know how to prepare adaptation strategies, whilst attempts to reduce carbon dioxide emissions are pointless. Implementing Kyoto would, after all, only delay the onset of climate change by six years.

The only way of assisting the developing world to cope with climate change is to help it to get rich, and first combat the more important problems such as AIDS and water contamination. This can be done directly through aid transfers, or indirectly through those tools best designed to achieve humanitarian aims: the market, trade and investment. Attempts at mitigation will be prohibitively expensive, reducing global Gross Domestic Product (GDP) to such an extent that the potential of these tools will be greatly reduced. If we don't waste money on mitigation, people in the future will be richer, and thus best equipped to cope with a problem that is based in the future rather than the present.

Thus the 'developing world' is annoyed at the West's current focus on climate change, although there are no representations from its people. Instead, authority goes to economists whose impartial analyses help us to delineate our priorities logically, whilst those doom-mongering climate scientists and environmentalists are the villains of the piece, going beyond their remit when proposing actions, and should be ignored.

Box 3.2a Some key quotes associated with *rationalism*

- 'The cost of halting climate change now is unaffordable and would be borne mainly by developing countries....We need to compare that number with the cost of dealing with the change as it occurs' (Portillo, Times, 26.6.05)
- '...well-meaning scientists have gone beyond their area of expertise and are conducting unsubstantiated politicking....What we should do first depends on the economics of where we can do the most good for the resources we spend' (Lomborg, Telegraph, 13.6.05)
- 'The trouble is that the climate models show we can do very little about the warming....So action on global warming is basically a very costly way of doing very little for much richer people far into the future.' (Lomborg, Telegraph, 28.10.04)
- 'Only market forces can save the planet' (Searjeant, Times, 16.11.00)

Box 3.2b Discourse analysis of *rationalism*

1. Basic entities recognised or constructed

- CC science still uncertain, particularly as regards impacts
- CC a problem but catastrophic effects and more than 2°C change very unlikely
- Authority to economists, Bjorn Lomborg, and cost-benefit analysis

2. Assumptions about natural relationships

- Developed world will benefit, could be serious effects for developing world
- Mitigation likely to achieve nothing, but the expense will make us unable to adapt
- Mitigation more costly than adapting as we go, and will harm poor economically
- Economic growth proven benefits, but we don't understand CC risks or effects
- We should make the poor richer, only then will they be able to cope with CC
- CC a problem for the future

3. Agents and their motives

- Unaligned and impartial economists, experienced in identifying priorities
- Doom-mongering scientists (e.g. IPCC) going beyond remit into politicking
- Natural scientists/ environmentalists focussing on the environment, not people
- The market and its invisible hand; beneficial free trade and foreign investment
- A developing world annoyed at West's priorities

4. Key metaphors and other rhetorical devices

- Kyoto as a metaphor for mitigation action and effect: will delay effect by six years
- Mitigation delaying the flooding of poor peoples' graves
- Global warming a dogma that is flooded with eco-hype

5. Normative judgements

- The way to help the developing world is to trade, invest and finance non-cc aid
- The obligation is to spend each dollar optimally; money spent on cc is wasted
- We should focus on current problems not future ones

The remaining six discourses believe that climate change is a serious problem demanding direct action with varying degrees of urgency, but differ mainly in what they think that action should be.

The next two frame the solutions in terms of mitigation, focussing on international deliberations about what to do rather than the impacts of climate change. The climate can be managed and reducing carbon dioxide emissions will prevent runaway climate change if we act quickly enough to prevent a 2°C rise in

temperature. Setting targets for mitigation action is thus the crucial first step. The only developing countries that register in these discourses are therefore those with high emissions levels: China, India and sometimes Brazil; it is here that the war against climate change will be won or lost.

3.3 Ethical Mitigation: West must lead

For *ethical mitigation*, the current Chinese and Indian positions are reasonable: per capita and historical responsibility factors dictate that the West should show the way by cutting emissions first. Future negotiations should therefore be based on the principle of contraction and convergence. Such efforts would enable developing countries' economies to grow in an environmentally-friendly way.

As western populations are demanding action on climate change, the failure to set worthwhile carbon dioxide limits lies with governments. The EU is currently at least doing its best to set targets; the criminal is thus the US, which is blocking negotiations for selfish reasons and being influenced by devious multinationals.

Box 3.3a Some key quotes associated with *ethical mitigation*

- 'China will only act on climate change if we lead by example....why should a developing country volunteer for the front line when the richest and most advanced won't even join the army?' (Hilton, Guardian, 21.6.07)
- 'Developed countries are responsible for the entire global warming so far, hence it is for them to reduce their large carbon emissions.' (Joseph, Guardian, 5.11.06)
- 'The best proposal so far is Contraction and Convergence....China and India will only commit when they have a fair share of a limited global facility' (Meacher, Independent, 7.12.03)

Box 3.3b Discourse analysis of *ethical mitigation*

1. Basic entities recognised or constructed

- A manageable atmosphere with a usually quite stable climate
- 2°C dangerous climate change level
- Tipping points

2. Assumptions about natural relationships

- Tackling CC involves mitigation, setting targets the key
- Stopping CC, growth and development potentially compatible
- Need for trade-offs: help poor countries via emissions trading/ clean development
- Delay unacceptable due to rapidly rising emissions

3. Agents and their motives

- Agency to governments, but influenced by powerful and devious vested interests
- Developing countries = China and India, where war against CC will be won or lost
- China + India self-interested but will follow West's lead
- US the criminal, stalling negotiations, EU (particularly UK) trying to act
- Public want action and are concerned but governments not doing enough

4. Key metaphors and other rhetorical devices

- Room in the atmosphere
- A war against CC
- Urgency and deep concern

5. Normative judgements

- West must lead on mitigation for historical and per capita reasons
- China and India have a right to development, we must help them make it clean
- Contraction and convergence the answer

3.4 Self-righteous Mitigation: Indochinese position ominous

Self-righteous mitigation instead takes the view that it is China and India who are stalling the negotiations, caring only for their own economies and thus allowing the US to hide behind their stance. In fact, there is a divide between the West, which is trying to tackle climate change, and the large emitters of the developing nations, who care only for their economic growth. The rapid growth based on fossil fuel consumptions that these countries are currently undergoing is terrifying, and must be reined in at the same time as western governments start cutting

emissions if we are to make any progress. Indeed it is pointless to start acting on mitigation if developing country emissions are not part of targets.

Box 3.4a Some key quotes associated with *self-righteous mitigation*

- ‘The developing world's resistance to Western-led initiatives over climate change stepped up yesterday when China rejected the European Union's key global warming target.’ (Spencer, Telegraph, 5.6.07)
- ‘...confirms a growing divide between developed and developing nations over the best way to tackle climate change.’ (Foster, Telegraph, 30.5.07)
- ‘In a thinly veiled critique of India's stance that the developed world must cut emissions before asking poor, developing countries to accept national targets for emissions reductions, Mrs Beckett said that only action from both sides would stave off potentially catastrophic economic and environmental changes.’ (Clover, Telegraph, 4.11.06)

Box 3.4b Discourse analysis of self-righteous mitigation

- 1. Basic entities recognised or constructed**
 - A manageable atmosphere with a usually quite stable climate
 - 2°C dangerous climate change level
 - Tipping points
- 2. Assumptions about natural relationships**
 - Tackling CC involves mitigation, setting targets the key
 - Incentives the key to tackling CC not punishments
 - Developing countries’ emissions critical
 - Divide between developed and developing world over tackling CC
- 3. Agents and their motives**
 - Developing countries = China and India
 - China and India stalling western efforts on CC, think of nothing but own economy
 - The West, particularly EU and the UK, doing what it can
 - West’s efforts worthless without developing countries on board
 - US and Australia didn’t ratify Kyoto because of Chinese and Indian position
- 4. Key metaphors and other rhetorical devices**
 - Chinese growth the scariest thing on Earth
 - Room in the atmosphere
 - Targets the key, whether countries are meeting targets ignored
- 5. Normative judgements**
 - Developing world should be promising/ doing more to combat CC
 - Developed and developing world should commit to emissions cuts simultaneously

The next three discourses all concentrate on the disaster in the making that is climate change. They are rich in imagery, metaphors and dramatic language.

3.5 Disaster strikes: look what's happening already, something must be done

Disasters strikes seeks to show the terrible consequences that dangerous climate change is already having on the developing world, a world more differentiated than in previous discourses, but also seen to be uniformly under attack. Whilst it is acknowledged that most scientists refuse to link current disasters directly to climate change, it is clear that there is some connection, and that there has been an increasing trend in the number and ferocity of natural disasters over the past few years.

Non-Governmental Organisation (NGO) reports and, uniquely, the voices of local people are given authority in demonstrating that climate change is already having devastating effects. The poor in the developing world, directly dependent upon nature for their livelihoods, are powerless in the face of this unprecedented threat. Although the outlook is therefore bleak, some of the worst can be prevented if the West takes action urgently, although *disaster strikes* is quieter than the other crisis discourses on what needs to be done.

Box 3.5a Some key quotes associated with *disaster strikes*

- ‘All my life the earth has told me when the rains are coming...I don’t understand what is happening to our lands...every year it is getting worse’ (Kelly, Guardian, 29.5.07)
- ‘Peru's glaciers are melting....In the north of Kenya, unprecedented droughts have driven herdsmen into deadly battles for the few water holes....Across the developing world, man-made climate change is an indisputable reality’ (Howden, Independent, 29.5.07)
- ‘Nowhere is the effect of global warming more dangerous than in Somalia, where the worst drought in 40 years is affecting the lives of 1.8 million people’ (Lean, Independent, 29.10.06)
- ‘They’re going under: two islands have disappeared beneath the Pacific Ocean – sunk by global warming. This is just the beginning’ (Lean, Independent, 13.6.99)

Box 3.5b Discourse analysis of *disaster strikes*

- 1. Basic entities recognised or constructed**
 - Dangerous CC already here, models show it will get worse
 - Increasing disaster trends basically caused by CC even if scientists not sure
 - Authority to NGO reports and environmentalists, with some backing from science
 - Authority/ voice also to local people, who understand about CC
- 2. Assumptions about natural relationships**
 - CC is having and will have disastrous consequences for the poor
 - Nature being affected like never before, CC the greatest ever threat to survival
 - CC a problem for the present, not in 100 years’ time
 - Outlook bleak but can prevent worst effects if action taken now
- 3. Agents and their motives**
 - Developing countries = those already being affected by climate change
 - Rich (West) are villains, poor are powerless victims, agency to rich governments
 - Poor already suffering, least equipped to adapt and least responsible
 - Can’t adapt because poor, isolated and dependent on nature/ agriculture
 - Poor begging world to act, don’t need academics to know there’s a problem
- 4. Key metaphors and other rhetorical devices**
 - Islands and coastlines going under
 - Frontline of global warming – a war against CC
 - Weapon of mass destruction, will make the difference between life and death
 - Possible to see the effect of CC with own eyes
 - Bringing CC to present, narrativisation
- 5. Normative judgements**
 - The rich West must act to slow global warming and pay for poor’s adaptation

3.6 Potential catastrophe: rich must act soon, but no need for upheaval

Potential catastrophe instead relies on modelling that shows the terrible impacts that unchecked climate change will have in the future throughout a developing world that is already environmentally fragile and under stress from population growth and resource scarcity. Climate change is inextricably linked to other issues such as poverty and threatens to reverse western-led efforts on human development in the poor world. There is no point in ignoring climate change and tackling other issues first such as poverty or malnutrition, as advocated by *rationalism*, if climate change will destroy all that progress and economic growth will leave the environment incapable of recovery.

NGO reports and some scientific papers reinforce the horrific consequences that are likely to be visited upon the earth. Clearly the rich West is to blame, and particularly multinationals that influence government policies and exploit the developing world.

So what to do? *Potential catastrophe*, as well as looking to the future rather than the present, concentrates much more than *disaster strikes* on what must be done to reduce the impacts of climate change. The developing world is right to be suspicious of the West, but this is where the money to mitigate and adapt must come from. The people of the West need to urgently make their governments act; there is not much time left. They can do this safe in the knowledge that there is no need for upheaval within their lives, or within the wider global system. Instead,

we need a shift in our moral code and a subsequent proportionate transfer of funds to developing countries, as well as widespread action on mitigation. Although, some worrying effects of climate change are inevitable, these actions will surely prevent the worst.

Box 3.6a Some key quotes associated with *potential catastrophe*

- ‘Climate change could lead to global conflict’ (Borger, Guardian, 11.5.07)
- ‘Tide of suffering: the rich world created the climate change threat. It must help the rest deal with the consequences’ (Watkins, Guardian, 2.4.07)
- ‘EU warns of global climate chaos: report forecasts wars, famines and migration: strategy aims for world’s first low-carbon economy’ (Gow, Guardian, 11.1.07)
- ‘West’s failure over climate change will kill 182 million Africans’ (Thornton, Independent, 15.5.06)
- ‘Ten years to prevent catastrophe’ (Meacher, Times, 10.2.06)
- ‘Global future: the coming war: terrorism, climate change and world poverty are inextricably linked’ (Dimbleby, Guardian, 31.10.04)

Box 3.6b Discourse analysis of *potential catastrophe*

1. Basic entities recognised or constructed

- 2°C increase a dangerous tipping point before runaway CC
- Dangerous CC will occur soon (if nothing done)
- Climatic models producing pretty accurate predictions
- Authority to NGO reports, some science (including IPCC reinforcing worst fears)

2. Assumptions about natural relationships

- Interlocking stresses on the poor; unchecked CC will ruin development efforts
- No point getting rich first if can't patch up the environment afterwards
- Likely massive consequences, e.g. global conflicts, mass migration (if nothing done)
- Need mitigation, large funds for adaptation, international action against free-riders
- Necessary changes can be achieved without overly damaging western lifestyles

3. Agents and their motives

- Multinationals evil: inhibit action of poor countries, influence rich countries
- Rich protecting themselves: poor right to be suspicious of their efforts
- Governments the problem: people want action, political will key
- Poor countries begging for help
- Agency to the rich governments, poor must be helped to adapt

4. Key metaphors and other rhetorical devices

- We are our own enemies in this war against CC
- Urgency, irreversibility
- Giving with one hand and taking with the other
- Dramatisation, verging on biblical imagery

5. Normative judgements

- Should apply precautionary principle
- Greatest responsibility lies with the developed countries
- We must not betray future generations
- Per capita rights – contraction and convergence; polluter pays

3.7 Crisis: the only potential saviour is upheaval

Crisis portrays an even more drastic vision of the future effects of climate change on the world. Drastic consequences are pretty much taken for granted, although the very worst effects can be prevented if appropriate action is taken. The West is to blame, indeed their actions can be seen as malicious as the full consequences of fossil fuel consumption are well known, and they have racked up a huge

ecological debt that makes a mockery of the current ideas of debtors and creditors at the global scale.

The action that is deemed necessary to avert the worst effects comes from the belief that the world needs a new direction that takes it away from the illegitimate economic models that currently support the world order. The environment needs to be seen as underpinning life, and we need to restructure our institutions and systems to take account of this reality, and bring true equity across different peoples. Only through such drastic measures can climate change be truly tackled.

Box 3.7a Some key quotes associated with *crisis*

- ‘Climate change cannot be tackled if existing injustices in global politics are overlooked....we need reform of the world’s political, financial and trade systems’ (Gumede, Guardian, 12.6.07)
- ‘The comprehensive upheaval that walks hand in hand with a warming world will make poverty eradication impossible. We are stuck in an environmentally suicidal global economy that promises ‘get-rich-quick’ for the few, and guarantees ‘stay-poor-long’ for the many.’ (Simms, Independent, 2.10.06)
- ‘the poor world daily lends its environmental capital to pay for the creature comforts of the global rich....It should be regarded as a debt owed by the developed world for the mismanagement of the atmosphere, and its associated costs.’ (Simms, Guardian, 6.3.02)
- ‘We need a new ethic of global stewardship’ (Doyle, Independent, 15.3.01)

Box 3.7b Discourse analysis of *crisis*

1. Basic entities recognised or constructed

- A world in crisis, run on the wrong lines and with illegitimate economic models
- Climatic models giving accurate predictions; scientific consensus alarmed
- Dangerous CC already here, imminent environmental collapse possible
- Authority to NGO reports, authors' own opinions and Andrew Simms

2. Assumptions about natural relationships

- Currently a suicidal global economy; need a sounder model of development
- CC will have drastic consequences, likely to cause upheaval of the world
- Can tackle CC without stalling world economy
- Need truly equitable international reform of financial, political and trade systems
- Managing the environment will become organising principle of world economy

3. Agents and their motives

- Developing world right to be suspicious of western aims
- Multinationals and rich countries pursue selfish, evil policies at expense of poor
- West actively harming the poor because they know the consequences
- Governments need to act, people and businesses awaiting the right direction

4. Key metaphors and other rhetorical devices

- Close to point of no return, deep urgency
- Society needs a change of course
- Ecological debt
- Dramatisation

5. Normative judgements

- Need a new reality of global stewardship
- Need a new economic model; a world order run on ecological and equitable lines

3.8 Opportunity: overcoming climate change can help the poor

Opportunity is the least robust of the discourses, with the few conforming articles containing components of the other discourses that view climate change as an important problem for international development. They are, however, linked by framing its emergence in the global consciousness as an opportunity. The opportunity lies in the benefits for the developing world to be had from switching to clean energy, and in kick-starting a move towards sustainability. Harmonising economic growth and environmental protection is possible in new ways, whether

through practical adaptation action or the export of clean energy from developing countries.

Box 3.8a Some key quotes associated with *opportunity*

- ‘By making access to energy more democratic, biofuels offer hope to poor countries seeking to ally economic growth with social inclusion and environmental protection.’ (da Silva, Guardian, 1.6.07)
- ‘simple renewable energy technology can be used both to adapt to the threat of climate change and also lift people out of a subsistence existence’ (Vidal, Guardian, 16.12.06)
- ‘Yet the problem also offers Africa a huge opportunity. Funding renewable technologies, such as solar and wind, will help tackle climate change. But at the same time it could energise and empower the economic development of the continent.’ (Odingo, Independent, 15.5.06)

Box 3.8b Discourse analysis of *opportunity*

- 1. Basic entities recognised or constructed**
 - CC already here
 - Authority to NGO reports for effects, examples of adaptation/ clean technology or author’s ideas for the solutions
- 2. Assumptions about natural relationships**
 - CC could cause big problems for the poor if we continue to depend on oil
 - Harmonising economic growth and environmental protection possible
 - CC adaptation can be used to move towards sustainability
 - Clean technology, renewable energy, economic improvement for the poor the keys
- 3. Agents and their motives**
 - Poor countries and people are in trouble, but can adapt to CC with assistance
 - Poor can use clean energy to leapfrog West, and export it to fund development
 - Developed governments being selfish, won’t hurt their economies
- 4. Key metaphors and other rhetorical devices**
 - Concern
 - Opportunity, hope and optimism
- 5. Ideological standpoints and normative judgements**
 - Differential responsibilities for combating CC; West must lead and foot the bill
 - Per capita contraction and convergence

3.9 Summary

Table 3.2 gives a summary of the different discourses, including the main similarities and differences. Having identified and characterised each discourse, we can move on to explore where and when each of the discourses were represented in UK quality newspaper coverage of climate change and development during the past decade.

Table 3.2 A summary of the different discourses, showing the important similarities and differences

Discourse	Basic entities recognised		Assumptions about natural relationships	Agents and their motives	Metaphors and rhetorical devices	Normative judgements
<i>Optimism</i>	Past warm episodes bringing benefits; Authority to sceptics		Past climatic episodes better indicators than models; CC beneficial overall;	Only losers are very low-lying countries;	Reassurance, optimism; Weather forecast failures; The Little Optimum (1100-1300AD)	Don't need to worry about CC so shouldn't do anything about it
	CC science uncertain; Natural variability		We will overcome problems	Doom-mongering climate scientists going beyond remit into politicking		
<i>Rationalism</i>	Catastrophic CC unlikely; Authority to economists		Mitigation achieves nothing; CC a future problem; Poor need to be richer to cope	Developing world angry at West's priorities; Market's invisible hand	Mitigation would delay the flooding of poor peoples' graves; Global warming dogma flooded with eco-hype	Should focus on current problems, not future ones; Should trade, invest and finance non-CC aid to help developing world
<i>Ethical mitigation</i>	Manageable atmosphere; 2°C dangerous CC; Tipping points		Need trade-offs to help poor countries adapt	China/ India will follow West's lead; US the villain	Urgency and deep concern; War against CC;	West should lead on path towards contraction and convergence and fund clean development
<i>Self-righteous mitigation</i>			Tackling CC = mitigation Can't delay: rising emissions	Developing countries = China and India	Room in the atmosphere	
			Developing countries' emissions critical	China/ India stalling western efforts	Chinese growth terrifying; Setting targets key	Developed and developing world should cut emissions at same time
<i>Disaster strikes</i>	Voice to local people	Dangerous CC here Increasing disaster trends	CC already having devastating effects but can prevent the worst	Rich countries are villains, poor are powerless victims People in the West want action	Bringing CC to the present; Narrativisation	West must act, contraction and convergence the answer
<i>Potential catastrophe</i>	Global env. crisis		Don't need to damage western lifestyles			
	<i>Crisis</i>	Climate models	Need upheaval of lives and international systems	Agency to governments	Close to point of no return; Ecological debt; Dramatisation	Need new economic models and reality of global stewardship to counter CC
	World in crisis	Authority to NGO reports				
<i>Opportunity</i>	Authority to NGO reports, examples of successful adaptation		Clean technology and poor's economic improvement keys Adaptation can kick-start move to sustainability	Poor can use clean energy to leapfrog West; Adaptation possible with assistance	Concern; Optimism, hope and opportunity	Contraction and convergence

4. Results: newspaper and discourse coverage over the past decade

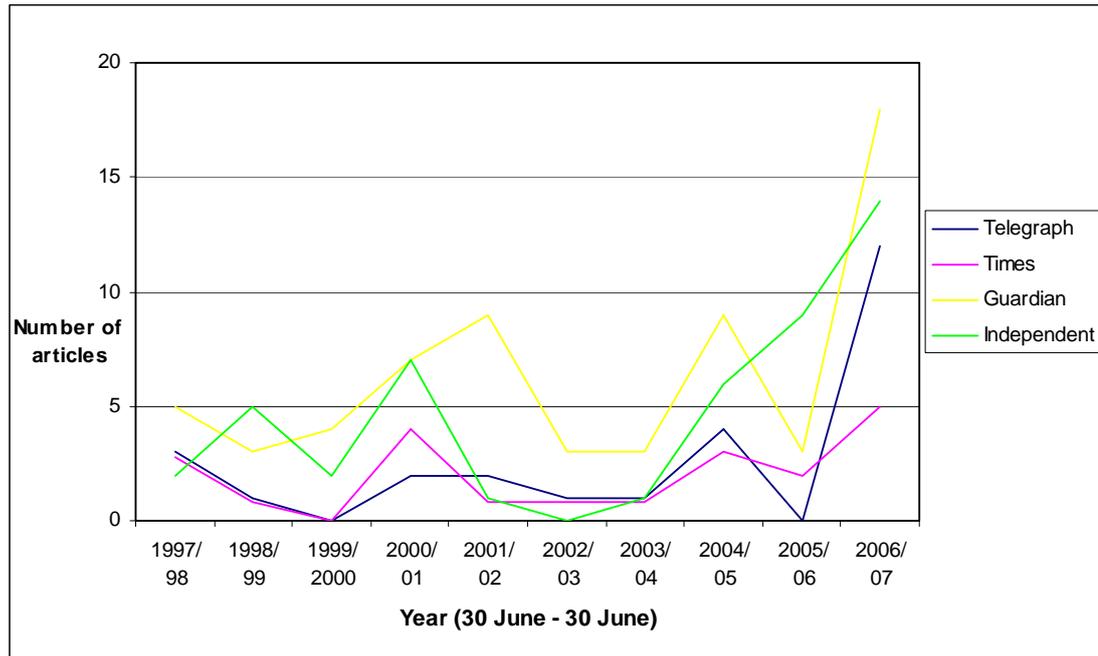
4.1 Coverage of climate change and development over the past decade in the different newspapers

Table 4.1 shows that the 158 articles focusing on climate change and development in the past decade were distributed far from evenly across the quality newspapers. Graph 4.1 shows, however, that trends in coverage were fairly consistent across newspapers: there were peaks in 1997/98, 2000/01, 2004/05, and then the largest peak in all newspapers in 2006/07 (years start and end on 30 June).

Table 4.1 Number of articles focusing on climate change and development published in each paper during the past decade

Paper	Number of articles
Guardian	64
Independent	47
Telegraph	26
Times	21
Total	158

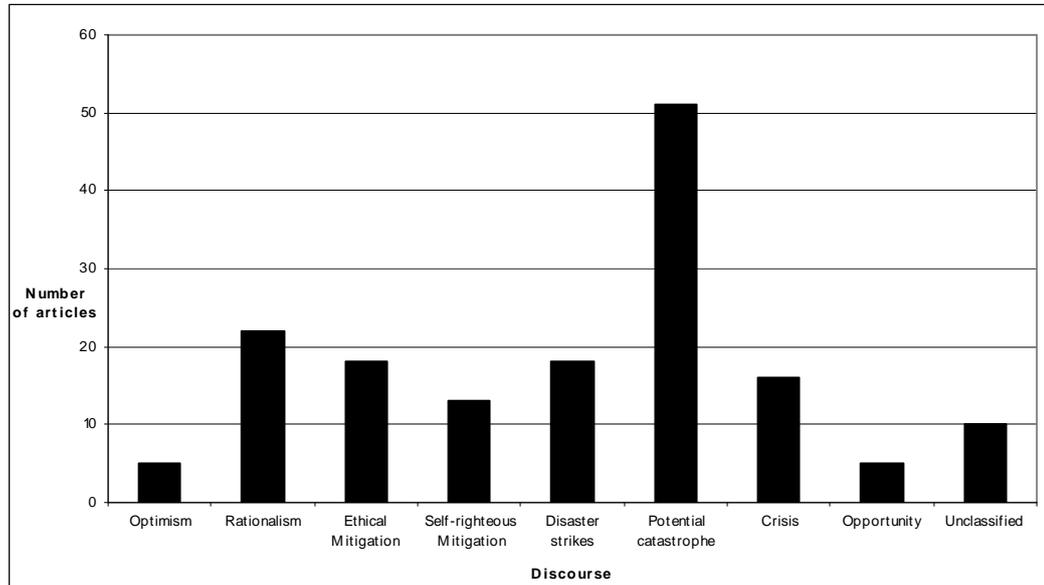
Graph 4.1 Trend lines showing coverage of climate change and development in each of the papers over the past decade (offset in places for clarity)



4.2 Coverage of the different discourses over the past decade

Graph 4.2 shows that *potential catastrophe* was by far the most common discourse during the past decade with 51 articles, well over double the number of the nearest competitor, *rationalism*. *Ethical mitigation*, *self-righteous mitigation*, *disaster strikes* and *crisis* were all represented by between 10 and 20 articles, whilst *optimism* and *opportunity* corresponded to only 5 articles each.

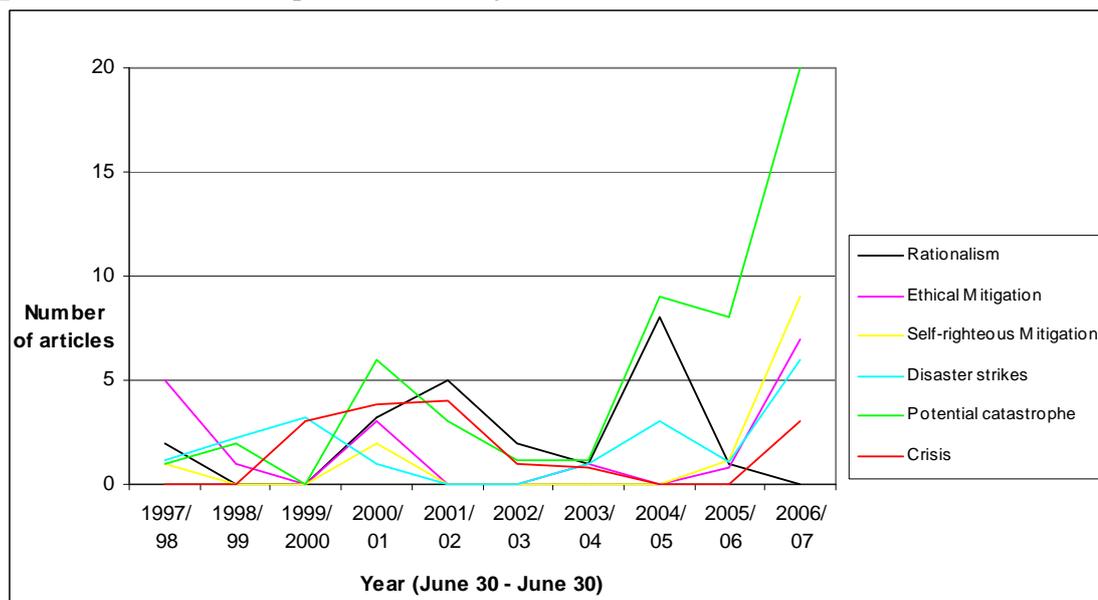
Graph 4.2 Total number of articles conforming to each discourse published during the past decade



Graph 4.3 shows the trends in coverage of the different discourses over the past decade. *Optimism* and *opportunity* are removed to make things clearer, as they appear so rarely. The trend lines show that although the peaks in 1997/98 and 2000/01 were made up of almost all the different major discourses featuring roughly proportionately to their overall number of appearances, this relationship breaks down from 2004/05 onwards. *Potential catastrophe*, *rationalism* and *disaster strikes* all have high peaks in 2004/05, while the other discourses disappear. From there, coverage of *potential catastrophe* increases dramatically to the extent that it formed virtually half of the total coverage in 2006/07, but the number of appearances of *rationalism* and *disaster strikes* markedly decreases by 2005/06. Whilst the peak in coverage in 2006/07 is thus largely taken up by *potential catastrophe*, coverage of all the other discourses apart from *rationalism* also notably increases.

Coverage of the mitigation discourses has increased greatly since 2005/06, having made only rare appearances before. In contrast, although making something of a reappearance in 2006/07, the *crisis* discourse was far more prevalent between 1999/2000 and 2001/02.

Graph 4.3 Trend lines showing coverage of the major discourses over the past decade (offset in places for clarity)



4.3 The coverage of each newspaper in terms of the different discourses

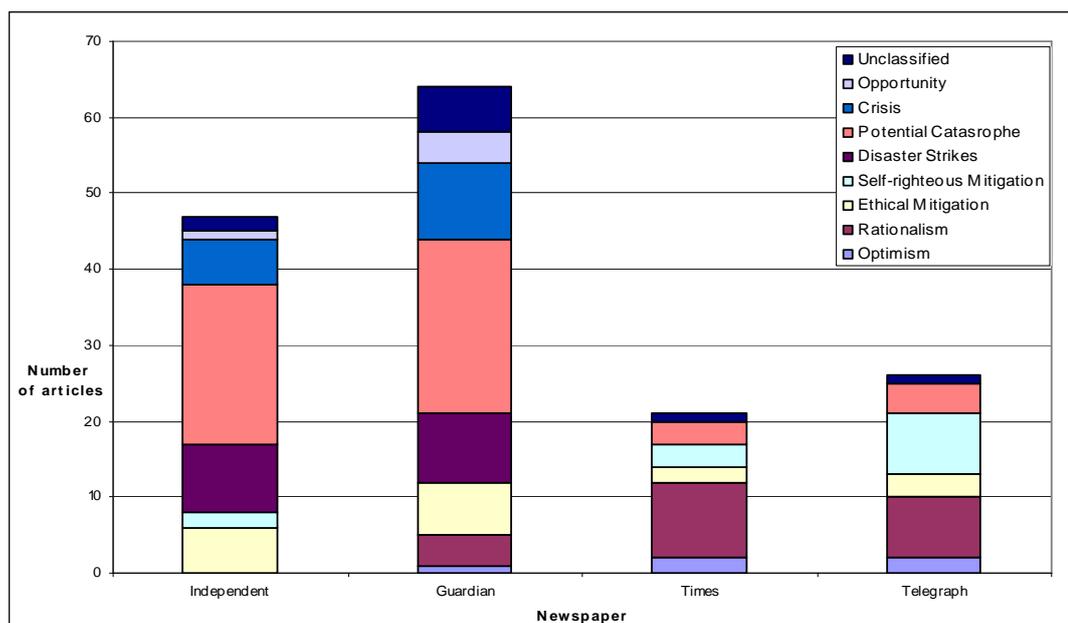
Graph 4.4 shows the number of articles from each discourse appearing in each newspaper, and graph 4.5 shows the reverse relationships, i.e. the number of articles from each newspaper appearing in each discourse. Together they highlight some interesting differences in the coverage of each newspaper.

The discourse of *potential catastrophe* features heavily in the coverage in the Independent and the Guardian, comprising 45 per cent and 36 per cent of the

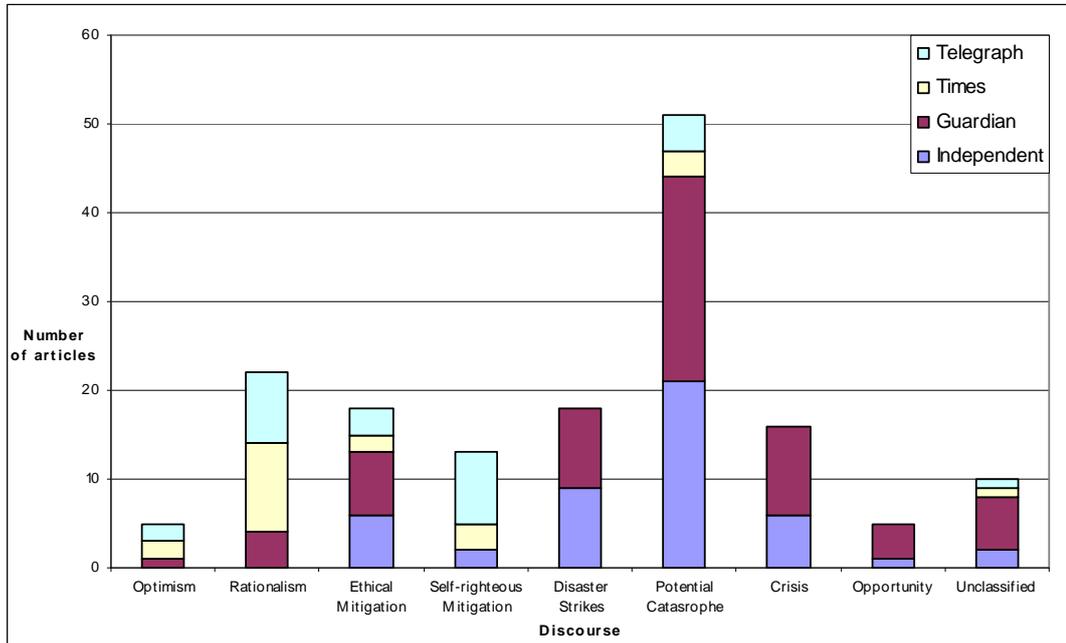
articles published, but is only a minor discourse in the Times and the Telegraph. *Rationalism* is the commonest discourse represented in the Times (48 per cent of articles), and equal with *self-righteous mitigation* in the Telegraph (both 31 per cent of articles published). *Rationalism* appears only very rarely in the Guardian and never in the Independent; *self-righteous mitigation* only very rarely in the Independent and the Times, and never in the Guardian.

The discourses of *disaster strikes* and *crisis* are prominent in the Independent and the Guardian, and *opportunity* makes an occasional appearance, but these three discourses are completely absent from the Times and the Telegraph. The Times and the Telegraph both published two articles conforming to *optimism*, the Guardian one, and the Independent none. *Ethical mitigation* is thus the only discourse that features more or less evenly across all papers in terms of the proportion of their overall coverage.

Graph 4.4 The composition of each newspaper’s coverage during the past decade in terms of the different discourses



Graph 4.5 The number of articles from the different papers conforming to each discourse during the past decade



4.4 Trends in discourse representation in each paper over the past decade

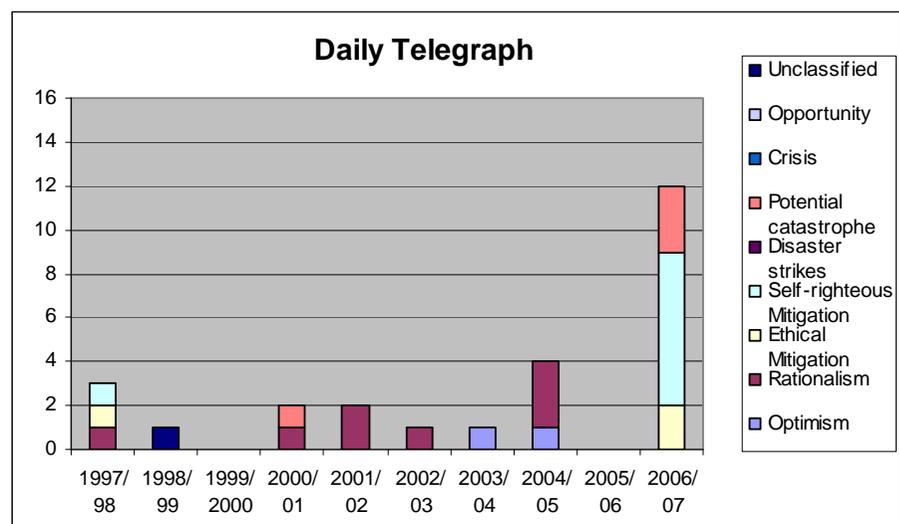
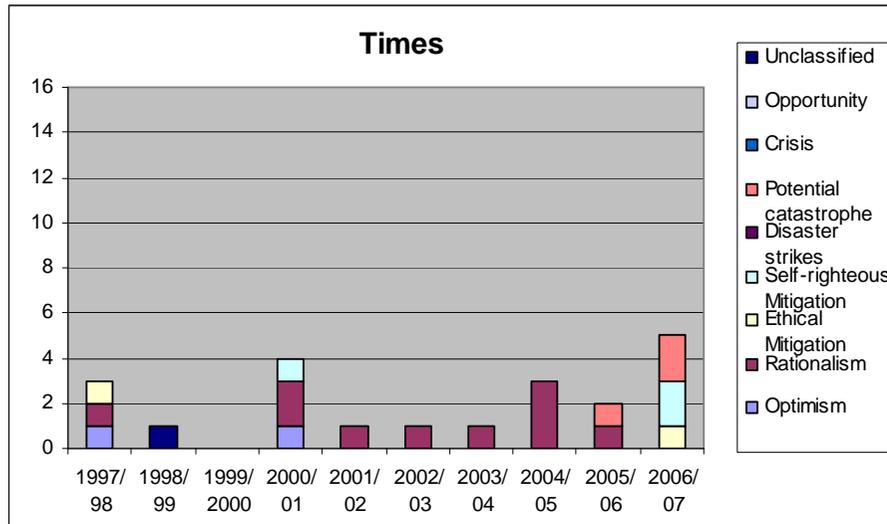
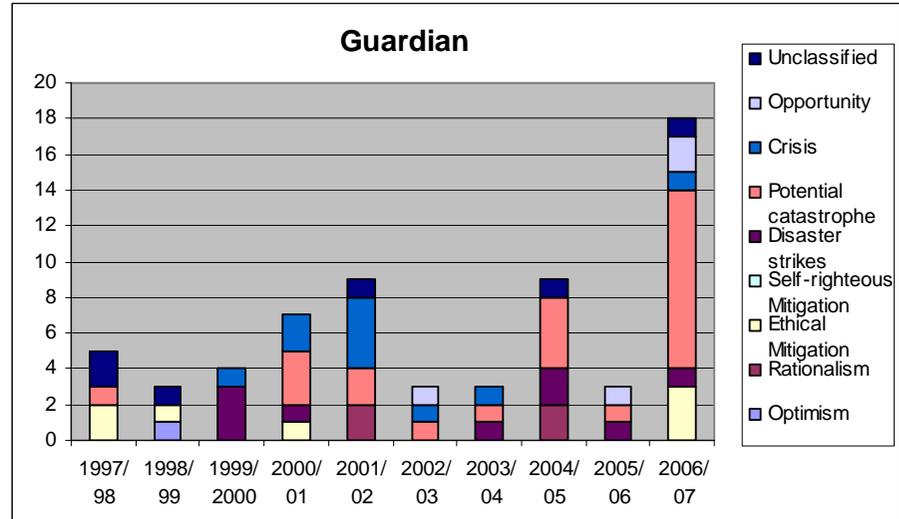
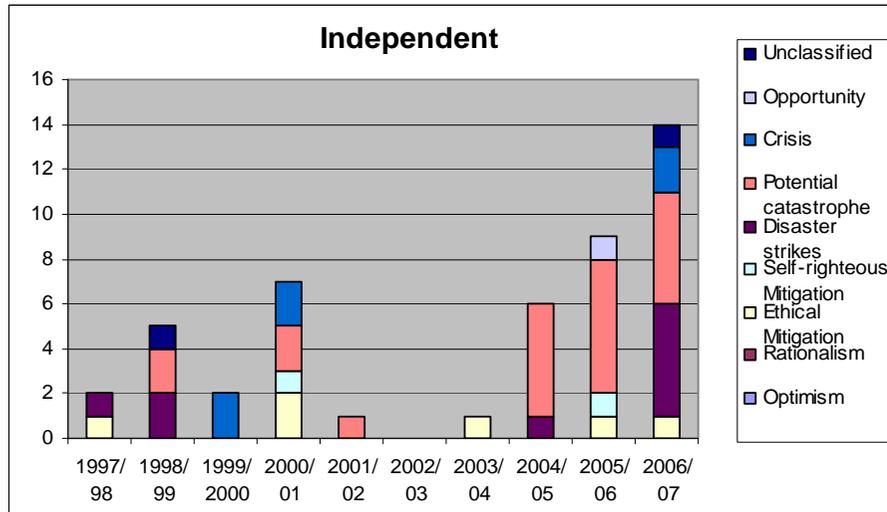
Graph 4.6 goes into more detail of each newspaper’s coverage by showing which discourses appeared in which paper in each year. For the Independent, *potential catastrophe* has been relatively prominent throughout, though particularly so since 2004/05. *Disaster strikes* and *crisis* came back to prominence in 2006/07 after only appearing towards the start of the decade, whilst *ethical mitigation* has retained a constant low profile.

Similarly, *potential catastrophe* has been important throughout the decade in the Guardian, but increased in importance in 2004/05, and then again markedly in 2006/07. *Crisis* and *disaster strikes* have maintained a relatively constant low

profile, although *crisis* has appeared less in recent years, whilst *ethical mitigation* made a comeback in 2006/07 after featuring in early coverage.

Optimism and rationalism formed the basis of the coverage in the Daily Telegraph and the Times between 2000/01 and 2005/06, but coverage in 2006/07 was completely different, with *potential catastrophe* and the mitigation discourses, particularly *self-righteous mitigation*, coming to the fore.

Graph 4.6 The composition of each paper's coverage in terms of discourses over the past decade



5. Discussion: what has influenced the coverage?

Much of the research into climate change coverage in the press has focused on analysing the factors influencing when coverage appears and how it is portrayed. Recent work focussing on the UK press has discussed the range of influences involved (Boykoff and Rajan, 2007), examined the contribution of science to media articles (Taylor and Nathan, 2002), and looked at the reasons behind differences in coverage across newspapers (Carvalho, 2002; 2005; Carvalho and Burgess, 2005).

Although no work has looked explicitly at climate change and development, it is interesting to see how the findings displayed here inform the various theories proposed. This section therefore investigates some of the most pertinent contentions, analysing their validity with regards the results of this research. It starts, though, by looking at the influence of key events.

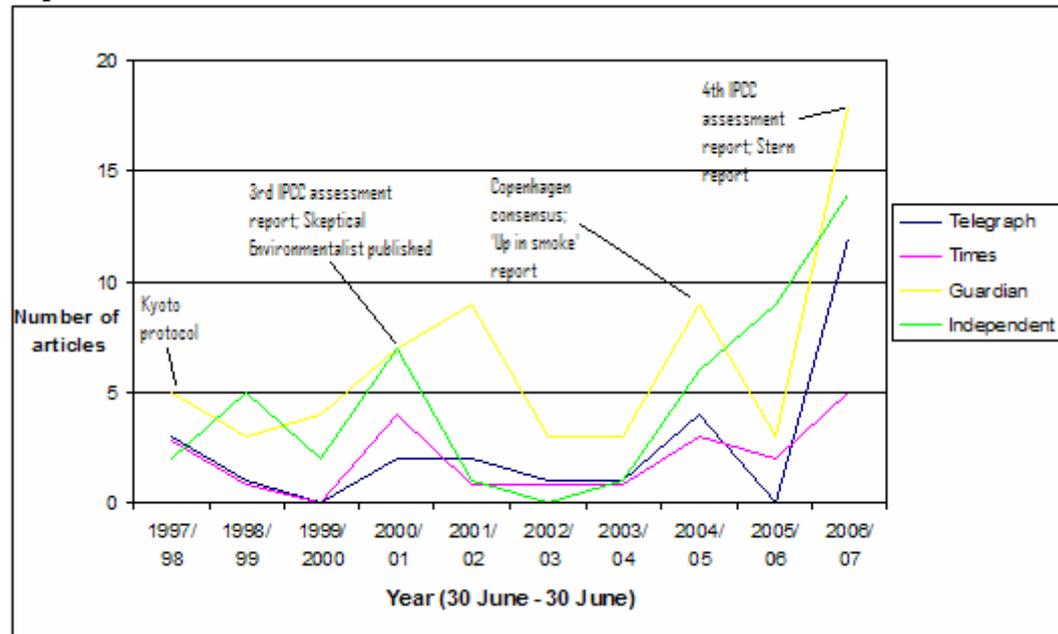
5.1 Critical discourse moments: the influence of key events

Graph 5.1 highlights some key climate change and development events that coincide with the years of peak coverage across all newspapers. Initially, the relationship holds up well; a reading of the articles shows that a large majority of those published in 1997/98 draw directly from action surrounding the Kyoto protocol (e.g. ‘International: rich and poor countries clash over pollution’, Clover, Telegraph, 6.12.97; ‘Three days to save the world’, Independent, 8.12.97.)

The same is true of the follow-up Buenos Aires meeting in 1998/99 (e.g. ‘In Buenos Aires, a clash of cultures looms over climate change’, Pearce, Guardian, 29.10.98). From there, however, the correlation breaks down. Although several of the articles

in subsequent peaks report directly on the events highlighted, and it is possible that other articles are more indirectly influenced, there is clearly a more complex process in play.

Graph 5.1 Critical discourse moments for climate change and development in the past decade

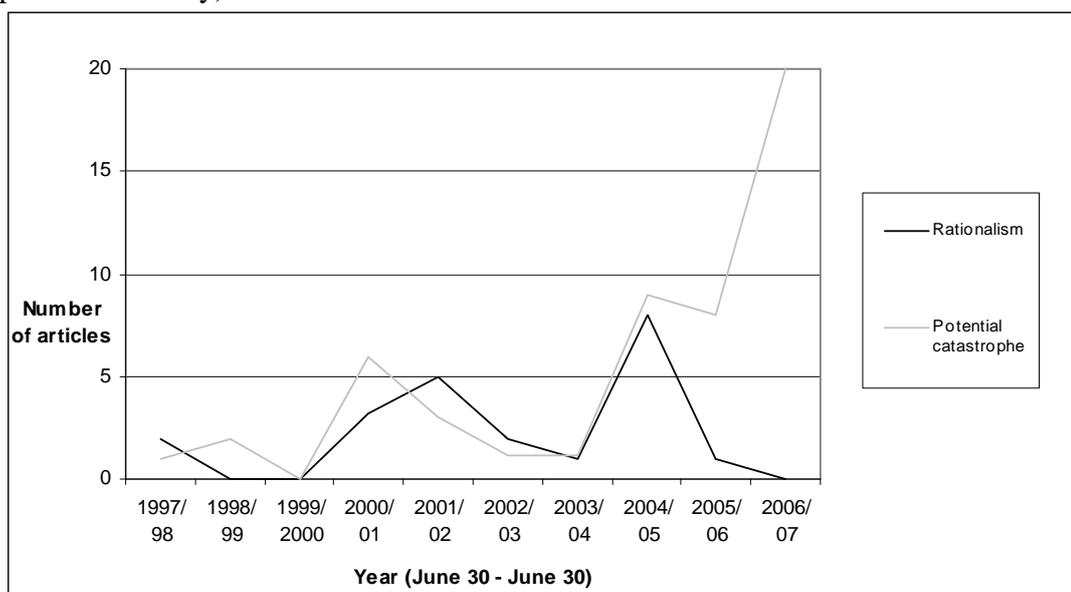


The importance of key events becomes more evident when coverage is broken down into the different discourses. The trajectories of the two most popular discourses, *rationalism* and *potential catastrophe*, are displayed in graph 5.2. Rationalism has two major peaks: 2000/01 - 2001/02 and 2004/05. These correlate directly with the two key events for this discourse, the publishing of Bjorn Lomborg’s ‘Sceptical Environmentalist’ in 2001 (Lomborg, 2001), and Lomborg’s Copenhagen Consensus meeting of economists in 2004, which aimed to prioritise development goals. Looking at the articles, these two events did indeed have an important direct influence on the volume of coverage: between 2000/01 and 2001/02, of the nine

articles published pertaining to *rationalism*, two were written by Lomborg, and five others focussed directly on the content of his book, whilst in 2004/05, out of eight articles, four were written by Lomborg and two others concentrated on the findings of his research.

Turning to *potential catastrophe*, the picture is not quite so tidy. Of the six articles published in the peak of 2000/01, only two report on the findings of the IPCC, whilst three others stem from various reports by NGOs and insurance experts. In 2004/05, two articles look at the ‘Up in Smoke’ report (Simms et al., 2004), four seem to be written fairly arbitrarily by establishment figures, and two more cover other NGO reports. In 2006/07, the IPCC and Stern reports receive under half the coverage, with the rest based on other reports and the announcements of establishment figures, notably Rt. Hon. Margaret Beckett MP, then British Foreign Secretary.

Graph 5.2 Peaks and troughs in coverage of the two major discourses (offset in places for clarity)



Clearly then, other factors are involved, and it is therefore worth investigating some of those proposed in earlier research on climate change and the media.

5.2 The influence of journalistic norms

Boykoff and Boykoff (2004) looked at how the widely accepted journalistic norm of balanced reporting influenced the translation of climate change in the US prestige press. They compared the scientific discourse with that in the media, finding that views contrary to those of the scientific mainstream were presented so frequently as to give an impression that the debate about anthropogenic influences on the climate was still wide open, when instead there were only a few sceptics in the scientific community questioning the role that human activity was playing. Adherence to the norm of balance was thus leading to biased reporting.

The results presented here inform this hypothesis from an alternative perspective. Instead of examining each article internally to assess whether it is affected by an effort at balanced reporting, we can look at the overall portrayal of discourses within different papers. If journalistic norms such as balance were particularly important in affecting coverage of climate change and development in the UK, then each newspaper might be expected to have given a more or less balanced coverage of the different discourses.

Instead, Graph 4.4 shows that the crisis discourses together take up over two-thirds of the coverage in the Guardian and the Independent, and Graph 4.6 shows that the discourse of *rationalism* completely dominated coverage in the Daily Telegraph and

the Times from 2000/01 until 2005/06. Clearly this does not indicate a strong attempt to represent a balanced mix of the different views surrounding climate change and development. Interestingly, however, all newspapers represented the highest number of different discourses in 2006/07, although of those given space, all demand urgent action on climate change.

In a later paper (Boykoff and Boykoff, in press), the authors build on their earlier work to examine attention cycles in the US prestige press. They found that adherence to journalistic rules on what makes a good story such as dramatisation, personalisation and novelty affected whether climate change was reported in the press. These journalistic norms mediated the influence of scientific, political and meteorological factors in producing spikes in coverage. In addition, these basic norms in turn influenced the application of deeper norms such as a desire for achieving balanced reporting, affecting the accuracy of coverage. In short, these ‘cultural factors’ went a long way to explain why media coverage of climate change had not been even-handed.

A similar in-depth analysis of these issues using the results presented here would stretch to another paper, but some basic observations can be made. It seems again that the influence of the various journalistic norms differs between discourses. Dramatisation is certainly important for the crisis discourses (‘African Apocalypse’, Lean, Independent, 29.10.06; ‘Ten years to prevent catastrophe’, Meacher, Times, 10.2.06), but less so for others such as rationalism or opportunity. Personalisation is particularly evident in the *disaster strikes* discourse where the voices of local people

are heard ('We feel we can't be the guardians of the land like our ancestors anymore and we don't know what to teach our children', Kelly, Guardian, 29.5.07; 'I am 70 years old now, and the temperatures are getting hotter and hotter as the years go by', Lean, Independent, 29.10.06), but largely absent from both the mitigation discourses, where countries are the entities and actors recognised. Novelty is no doubt important at various points in all the discourses, but it is unlikely to explain the recent large spike in coverage.

Again, the impression is therefore that journalistic norms certainly influence coverage, but are far from the whole picture.

5.3 The influence of newspaper editorial stances

Carvalho (2005; 2007) and Carvalho and Burgess (2005) looked at how newspaper 'ideologies' influenced coverage of climate change in the Times, the Guardian and the Independent. They found that, in general, climate change was ideologically constructed, with profound difference in its portrayal across different newspapers, differences which both represented and reinforced existing ideologies. Newspaper ideologies also mediated the influence of politics and science: newspapers were sensitive to shifts in these arenas, but only within the bounds of their ideologies.

The large variation in coverage across the different newspapers evident in this research (graphs 4.4, 4.5 and 4.6) clearly merits some consideration, and it is tempting to assign these differences to something akin to ideology. The Times and the Daily Telegraph are 'conservative' papers, identifying with neo-liberal

capitalism, the free market, a Promethean view of man's relationship with nature, and an aversion to political control (Carvalho, 2007). Hence their coverage between 2000/01 and 2005/06 consists of *optimism* and *rationalism* (Graph 4.6), discourses that deny the need to do anything about climate change and shy away from the idea of potentially severe problems for the developing world. But what is it that shakes them out of this stance in 2006/07? Surely the complete change in coverage takes them outside their ideological bounds?

On the other side of the fence, the Guardian and the Independent are seen as supporting a social democratic ideology, with a global outlook and values of equity and solidarity (Carvalho, 2007). Hence their coverage is dominated by the crisis discourses and *ethical mitigation*, all demanding that urgent action is taken by the West to help the developing world. While the Guardian gives space to *rationalism* in 2001/02, its appearance in 2004/05 has a distinct framing: Lomborg is called the 'controversial scientist' and one of the articles carries rebukes from environment and development groups (Vidal, 21.10.04). That all sounds rather neat, but why such a lull in coverage in the Independent between 2001/02 and 2003/04, followed by a surge? There is a suspicion that late 2004 saw the paper taking an editorial decision to put climate change near the top of its agenda, for what reason one can only speculate.

So what one might roughly call newspaper ideologies or, less controversially, editorial stances, does seem to influence coverage significantly, but yet again, it does not explain the whole picture, nor the peaks and troughs in attention.

5.4 The influence of key actors

Various papers have shown the importance of journalists' sources in shaping media coverage of climate change (Antilla, 2005; Carvalho, 2005; Mormont and Dasnoy, 1995). Here, the interpretation of 'actors' is expanded to include organisations such as NGOs and the scientific community, the latter's influence investigated by Nissani (1999), amongst others.

Different types of actors influence different discourses, as shown by who is given authority, outlined in the discourse summaries. An individual actor can be particularly important in influencing the appearance of a discourse, as with Bjorn Lomborg and *rationalism*. Similarly, Andrew Simms - the policy director of the New Economics Foundation (NEF), a leftwing think-tank - has been an important influence on the portrayal of *crisis*, writing 7 of the 16 articles to appear, and being heavily quoted in two more.

Other discourses rely on broad classes of actors. NGO reports and actors are particularly important for the crisis discourses, with a wide variety represented, though some come out as favourites, such as the NEF for the *crisis* discourse. Other NGOs whose reports feature, or whose employees are used for authority quotes include Christian Aid, Oxfam, Practical Action, and the Red Cross. No doubt there are myriad reasons why some NGOs feature more heavily, including the timing of release of reports and particular links between journalists and NGO employees.

Interestingly, scientific papers are rarely used as the basis for articles. Although the IPCC reports are covered, particularly within the *potential catastrophe* discourse, the reports are in part a political process. Whilst scientists are sometimes used as sources to legitimate stories, their work can form the bulk of NGO reports, and there is even the occasional article written by a scientist, novel scientific findings are used only rarely as the basis for an article. Articles using contemporary scientific findings tend to concentrate on how new research has shown smaller or, more frequently, greater impacts of climate change (e.g. ‘One third of the planet will be desert by the year 2100, say climate experts’, McCarthy, Independent, 4.10.06). This is despite the fact that there is a burgeoning academic literature focusing on issues surrounding climate change and international development, often quite divergent from, and far more nuanced than, the media discourse.

5.5 Influence of the wider social context

Interestingly, the peaks in coverage (graph 5.1) are largely consistent with those for climate change coverage alone (see Boykoff and Rajan, 2007). Perhaps, therefore, we should be looking at wider social, political and economic factors to explain coverage, rather than focussing on issues specific to climate change and development. To a certain extent, the view one takes on how they affect coverage depends on how one understands the mass media’s role within these broader contexts. Is the sharp rise in coverage in 2006/07 more a reflection of the greater political importance given to climate change and development, or of greater public concern about the issue, or the realisation with the publishing of reports such as Stern that it could have economic implications even for the developed world? Which

of these factors has been particularly important in the complete shift in coverage in the Times and the Telegraph?

While wider social and economic factors may remain harder to identify precisely, it is possible to trace the influence of some political factors and interventions. Political issues appear particularly important in the appearance of the mitigation discourses – understandably, considering their focus on international relations. Thus Kyoto was the basis of mitigation articles in 1997/98, and various international disputes between China and India and the developed world, particularly in relation to the G8 meeting, formed the content of many of the articles in 2006/07 (e.g. ‘India challenges West over climate change’, Foster, Telegraph, 13.6.07).

At a more specific level, there are times when the UK government has heavily and quite deliberately influenced the agenda. For example, the government’s recent attempts to bring climate change discussion to the United Nations Security Council were the cause of a spate of *potential catastrophe* articles in 2006/07 (e.g., Climate change could lead to global conflict, says Beckett’, Borger, Guardian, 11.5.07). A few articles have even been written by politicians, with Rt. Hon. Robin Cook MP (10.6.05), former British Foreign Secretary, adding his voice to the *potential catastrophe* discourse.

5.6 Summary

There is a wide array of factors that influence the media coverage of climate change and development, including several not examined here, for example the theories on

endogenous attention cycles, following Down's (1972). This discussion has highlighted some interesting issues, such as the heavy influence of individual actors on two of the discourses, the divergent coverage between newspapers, roughly aligned with what one might term ideologies, and the marked tendency to use NGOs as sources rather than the scientific community, both in researching and legitimising articles.

So how to tie down the influence on coverage more precisely? Firstly, it has to be questioned whether it is valid to isolate one factor and then examine its influence on media coverage. Of course, this is not the same as postulating singular or linear causality, which would be a gross simplification, as noted by Boykoff and Boykoff (in press). But it does seem to lead to over-stating a particular factor's importance, when a multi-factorial study could better assess comparative influences.

This discussion also shows that classifying discourses allows a much more nuanced understanding of the various influences. The extent to which each discourse is influenced by particular factors varies considerably, and it therefore does not seem valid to generalise about which factors are the most important in the media discourse as a whole.

With such a complex picture, the way forward might be in adapting the research process adopted here by assessing the varying factors influencing each individual article. The results could then be combined to enable an understanding of what influences the construction and coverage of the different discourses. An approach

such as this should enable a better appreciation of the way an issue such as climate change and international development is constructed in the press.

6. Conclusions

What do the results suggest about media perceptions of climate change and international development? There are two broad conclusions to be drawn. First, the recent rise in coverage seems to involve an increasing sense of impending catastrophe regarding the impacts that climate change will have on development. Such a tone was apparent in articles from the late 1990s (e.g. ‘World facing plague of disasters’, McCarthy, Independent, 24.6.99), so the best evidence lies in changes to the composition of discourses and in the volume of articles published. All the discourses other than *rationalism* and *optimism* show some degree of concern about the impacts of climate change and demand urgent action to reduce them. The most extreme of these positions, the three crisis discourses, dominate coverage in the Guardian and Independent and represent virtually all the large increase in coverage in 2006/07. Meanwhile *optimism* and *rationalism* disappear from coverage in the Times and the Telegraph in 2006/07, having dominated before, to be replaced by the mitigation discourses and *potential catastrophe*.

Various authors have shown that the media frequently fails to convey scientific uncertainty regarding climate change accurately, tending to sensationalism and increased certainty (Ladle et al., 2005; Weingart et al., 2000; Smith, 2005). Hulme (2007) finds that this inclination to emphasise a crisis is apparent even in coverage of the most recent IPCC reports - an unequivocal mistranslation - and that interpretation of the academic discourse on climate change in terms of disaster is illegitimate (reported in BBC, 2007). In this light, sensationalism in the coverage can be seen as part of a development crisis narrative that ignores the complexity of

the situation (Roe 1991; 1995), although some recent papers have argued that there is now a valid academic discourse suggesting potential catastrophe (e.g. Hansen et al., 2007). Nevertheless, the discussion in the media clearly does not portray the uncertainty inherent in many aspects of our climate change understanding (Dessai et al., 2007). It should be pointed out, however, that most of the discourses rely on NGO reports rather than scientific articles for their evidence; perhaps this mistranslation is not just the fault of the media.

Secondly, in all the discourses other than *optimism* and *self-righteous mitigation*, which don't really engage with the issue, developing countries are portrayed as needing the help of the developed world if they are to deal with the impacts of climate change. There is little discussion of the agency of poor people in dealing with the impacts of climate change, nor the complex interplay of factors that will influence vulnerability and adaptation to climate change in the developing world (Adger et al., 2003). Only *disaster strikes* gives any voice to poor people in describing the impacts of climate change and how they might cope, while there is very little differentiation in general regarding the 'developing world'. Indeed, five of the ten unclassified articles did not conform to any of the discourses because they produced a more complex picture either of the route to adaptation, or of the actions and needs of different countries and groups of actors in the developing world. There is little question that the media could be better informed about these complex issues.

In addition to highlighting these general media perceptions, this research has demonstrated the range of opinions surrounding climate change and development

represented in the UK press, showing their similarities and the important points where they differ (Table 3.1), and established how the different interpretations have fashioned coverage over the past decade. Identifying the discourses according to their component parts has provided a less subjective and more nuanced basis from which to explore influences on press coverage. In so doing, the research has contributed to recent discussions surrounding the various influences on media coverage of climate change (e.g. Boykoff and Boykoff, 2004; Carvalho and Burgess, 2005), and shown the potential for more in-depth research into the various hypotheses.

The analysis opens up two further important avenues. The first, depending on whether one views discourses as impenetrable, is an assessment of the validity of the different discourses surrounding climate change and development, which can only be undertaken with an understanding of their differing components. Comparative judgement is possible based upon the assumptions that each relies on and the research and authorities that each legitimises, aided by the highlighting of failings from criticism between discourses (following Dryzek, 2005). Secondly, the analysis offers potential for a detailed assessment of the impacts of coverage on public perceptions (see Corbett and Durfee, 2004; Smith, 2005 for earlier work regarding climate change), a key research stream for understanding how policy and public support for policy can be influenced through the media.

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