Dividing climate change: global warming in the Indian mass media

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Abstract Much research has now been conducted into the representation of climate change in the media. Specifically, the communication of climate change from scientists and policy-makers to the public via the mass media has been a subject of major interest because of its implications for creating national variation in public understanding of a global environmental issue. However, to date, no study has assessed the situation in India. As one of the major emerging economies, and so one of the major greenhouse gas emitters, India is a key actor in the climate change story. This study analyses the four major, national circulation English-language newspapers to quantify and qualify the frames through which climate change is represented in India. The results strongly contrast with previous studies from developed countries; by framing climate change along a 'risk-responsibility divide', the Indian national press set up a strongly nationalistic position on climate change that divides the issue along both developmental and postcolonial lines.

1 Introduction

India is the world's largest democracy. It is a country with a vibrant civil society in which free speech and public debate are proudly exercised to the full. Accordingly, public understanding and opinion are highly significant; those who shape public knowledge and perceptions are those who play a major role in defining the country's course of action in India, particularly in the shaping of governmental policy (Sonwalkar 2002). This paper investigates the role of the media in shaping the climate

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change story for the reading public, and so begins to assess the information available and public arguments currently underway on the topic in India.

1.1 Climate change and the media

The role of mass media in shaping public understanding of environmental issues has been well documented in recent years (Burgess 1990). Much research has theorised on and now established the role of the mass media in 'framing' and re-forming climate change issues, whether scientific or political. Most notable among this work have been analyses of 'climate scepticism' in Western mass media (Trumbo 1996; Pellechia 1997). In the USA, Boykoff and Boykoff (2004) found that up to 50% of articles on climate change doubted either its existence or anthropogenic origin. In Australia, McManus (2000) suggested that climate change coverage was an example of 'distanciation', whereby the 'cause' and 'effect' of climate change were separated by the media to suggest that Australian emissions were not the cause of global warming-related environmental change there. In both the American and Australian cases the scientific consensus about climate change was framed and distorted in such a way as to depoliticise and reduce the importance of the issue.

Each of these studies has illustrated that, despite being a global scientific phenomenon, climate change is represented in highly varied manners at the national level. Different mass media, and different groups within those media, communicate climate science through a set of culturally specific frames, which have a major influence on public perception and, by extension in a voting democracy, on subsequent public policy (Trumbo and Shanahan 2000; Burgess 1990).

The theoretical underpinning of this work is a recognition that environmental change does not exist in isolation from society. Information and knowledge about the physical world are part of a 'social chamber', in which they are interpreted in the context of specific social values and cultural norms (Demeritt 2006). The mass media are a key part of this process, acting as gatekeepers of information on climate change (Carvalho and Burgess 2005). The media exist both in and between the public and private spheres of society, up-scaling normalising values and simultaneously ascribing them to specific issues and news stories, which are then read and internalised at the private, individual scale (ibid). In short, the political, social, and cultural contexts of a society 'affect the collective definition of social [and in this case environmental] problems' (Hilgartner and Bosk 1988: 64).

Climate change exists within this framework and so is also shaped by social norms. To date, almost all research on the communication of climate change has focused on Western social contexts and norms, with little consideration of how the issue is being framed in other countries where the macro-scale normalising values in the public sphere are different. This study attempts to address this deficit by considering one of the world's major emerging economies, India.

1.2 Climate change in India

Climate change is attracting increasing attention within India, and, in parallel, India is attracting increasing attention within the climate debate. This attention reflects both India's physical and political situation. Physically, the country's population of 1.03 billion, 70% of which still lives in rural areas, surviving largely on subsistence

farming or labouring, as well as its location on the Himalayan-fed South-Asian mega-deltas, make it highly vulnerable to the effects of climate change (ORG 2001; Mawdsley 2004; Toman et al. 2003). The Fourth Assessment Report from the Intergovernmental Panel on Climate Change (IPCC 2007) highlights the threat posed to large areas of the Himalayan foothills by flooding as glacial melt waters increase in the near future. Further, potential monsoonal changes and sea level rise around the low-lying coastal areas threaten India's growing coastal metropolises (Toman et al. 2003; Shukla et al. 2003).

These risks must be considered alongside the reality that India is a major producer of global greenhouse gas emissions. As the second-fastest growing economy in the world, with economic growth of 8.7% in 2006 alone, India's energy consumption has risen by 3.7% over the period between 2001 and 2006 (MEF 2007). This largely fossil-fuel based growth has contributed to rising greenhouse gas emissions—rising from 682 Mt CO_2 in 1990 to 1,342 Mt CO_2 in 2004 (Watkins 2007). While absolute growth has been phenomenal, India remains a poor country in per capita terms, and this division is reflected in the disparities in per capita carbon dioxide (CO_2) emissions. A citizen from the highest income group in India—comprising just 1% of the population—emits four-and-a-half times more CO_2 than a citizen within the poorest 38% of the population (1,494 kg per capita compared to 335 kg per capita); the richest 14% of citizens emit 24% of India's CO_2 emissions (Ananthapadmanabhan et al. 2007). While in averaged per capita terms, each citizen's emission is 1/11 of that of those in wealthy countries, in real terms there is major variation and social stratification in the greenhouse gas emissions of India (Watkins 2007: 69).

In this context, India has remained politically defensive both in response to these national physical threats and also in terms of international action to fight climate change. The government remains committed to its historic position that 'the environment cannot be improved in condition of poverty' (former Indian Prime Minister Indira Gandhi at United Nations Conference on the Human Environment, Stockholm, 1972). Further, during international negotiations past and present India has argued that historic responsibility for climate change resides with the developed world; during one of the earliest IPCC conferences, the leader of the Indian delegation argued that:

If per capita emissions of all countries had been on the same level as that of the developing states, the world would not have faced the threat of global warming.

(Ministry of Environment and Forests (MOEF), Statement by leader of the Indian delegation at the United Nations IPCC conference, Delhi, 1991)

Correspondingly, India signed up to the United Nations Framework Convention on Climate Change (UNFCCC) in 1993 as a 'non-Annex I' state, not taking on binding emissions-reduction targets. Within both the government and also the wider civil society international emissions caps are viewed as 'deepening the north–south divide' by capping India's emissions just as its development is taking off (Agarwal and Narain 1991: 1). The Centre for Science and Environment—one of India's most prominent environmental groups supplying information and opinion to the media—has regularly used the term 'carbon colonialism' to describe current climate negotiations, arguing that efforts by developed countries to 'force India' to reduce its emissions are yet another attempt on the part of the developed world to stifle India's development (ibid). Climate change is viewed primarily through a North–South

perspective, where responsibility for present and future change lies with developed countries, the international, postcolonial 'other' (Said 1978).

This paper examines how both climate science and climate politics are represented and communicated within this Indian context by the media.

1.3 The Indian media

The media are instrumental in shaping public understanding of environmental issues in India (Chapman et al. 1997). Recent public polling suggests that the print media remain the major source of information for the literate public on climate change issues; the 2007 Global Nielsen Survey suggested that 74% of the surveyed population used newspapers as the primary source of information on climate change.[1] Unlike in many other emerging economies, almost all of the mass media in India are independent of state control; just 0.42% of newspapers sold in 2004/2005 were published by a government-owned media house (IndiaStat 2007).

Newspapers are published in over 30 languages, with Hindi and English the most dominant; the only nationally circulated newspapers are the English-language press. These serve the English-literate classes, and take a similar form to the British broadsheet papers. All four of the major English-language papers, *The Times of India*, *The Hindu*, *Hindustan Times*, and *The Indian Express*—with circulations of 7.4, 4.05, 3.85, and 0.95 million respectively—are widely acknowledged as the reading material of those in agenda-setting positions (IndiaStat 2007; Sonwalkar 2002). By assessing the public information on climate change that is communicated to this group, we begin to understand a key process in the formation of private perception among this influential sector of society.

2 Methodology

The treatment of climate change by these four newspapers was assessed through a focus on the main articles published by each newspaper between January 2002 and June 2007, excluding opinion and editorial pieces. The methodology followed a discourse analysis, and used the outputs of the Indian discourse—the texts—but also those producing that discourse—the journalists, editors, and free-lance writers at each of the papers—as the subject matter (Fairclough 2003).

Following Fairclough's (2003) discourse analysis approach, the texts—the units of analysis (Fowler 1991)—were sampled and then coded to elucidate their position on both climate science and climate politics. Each of the papers was sampled for headline terms 'Climate Change', 'Global Warming', 'Greenhouse Gas*',[2] and 'IPCC'[3] between January 1, 2002 and June 1, 2007.[4] Use of these search terms is well

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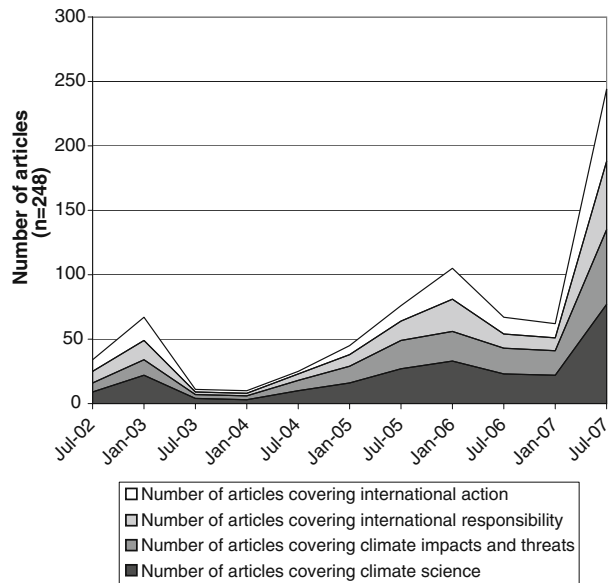[1]This figure should be approached with some caution because of the country's large illiterate population, which is difficult to survey through remote data collection. However, as this study is concerned with the readership of newspapers it is acceptable to use the writing-based Nielsen format for such statistics.

[2]Use of an asterisk denotes a wildcard in the search database to account for 'gas' or 'gases'.

[3]Both the acronym 'IPCC' and full title 'Intergovernmental Panel on Climate Change' were used.

[4]Pilot searches for earlier dates yielded an extremely small number of articles.

Fig. 1 Thematic breakdown of newspaper article codes assigned, Jan 2002–Jun 2007; $n = 746$. This figure shows the number of articles in each theme in order of shading: Science (*darkest*), Impacts (*second darkest*), Responsibility (*second lightest*), and Impacts (*lightest*). (Note that the absolute number of articles here is greater than that sampled ($n = 248$) as more than one coding theme was assigned in many articles. While this does distort the representation of the absolute distribution, it accurately shows the level of activity and breadth of discussion in press stories)

established in climate change media analyses (e.g. Antilla 2005) and ensures that the overwhelming number of casual references to climate change in many articles do not skew the main coverage of the issue. In total, 248 articles were returned from the database searches, all of which were used in the analysis.

A coding scheme was developed around the main themes of the research project. Four main climate change themes were used: 'Science' and 'Impacts', and 'Responsibility' and 'Action'. The temporal distribution of the sample *by theme* is shown in Fig. 1. Within each theme, specific coding series were developed to assess the press' coverage of particular issues (Tables 1 and 2, for 'Science and Impacts' and 'Responsibility and Action' respectively). The coding methodology was tested for reliability (reproducibility) and validity (accuracy) following the methodology developed by Krippendorff (2004), returning coefficients of 0.812 and 0.919 respectively.

In addition, interviews were conducted with 15 of the major environmental writers in the English-language press. These interviews were based on, although did not explicitly refer to, the results of the article content analysis (Neuendorf 2002).

3 Climate science coverage

In comparison to the scepticism in the North American and European press, the coding results suggest that the Indian press entirely endorses climate change as a scientific reality. Based on the codes in Table 1, 100% of the 247 articles discussing the existence of global warming argued that rapid, unusual climate change does exist today. In addition, 98% of these articles directly attributed climate change to anthropogenic causes. Just five articles remained unconvinced that the phenomenon

Table 1 Codes used on coverage of science and impacts

Code 1—coverage of existence of climate change

S1	Article argues that rapid, unusual climate change does not exist today
S2	Article argues that rapid, unusual climate change may exist today
S3	Article argues that rapid, unusual climate change does exist today

Of those coded S3: code 2—coverage of the causes of climate change

S4	Suggests that present-day climate change is naturally forced
S5	Suggests that present-day climate change may be naturally and/or anthropogenically forced
S6	Suggests that present-day climate change is anthropogenically forced
R1	Uses environmental change as evidence for climate change
R2	Uses scientific research as evidence for climate change

Of those coded S2 and/or S3: code 3—coverage of impacts resulting from identified climate change

A1	Article refers to the impacts of climate change
A2	Article refers to the impacts of climate change in India
A3	Article refers to the impacts of climate change globally
A4	Article refers to the impacts of climate change as a threat

was the result of human activity, four of which suggested the causes were unknown rather than simply 'natural' (S4, Table 1). Articles referred to climate change as a 'certain' process (*Hindustan Times* 10.v.2007), and many were also highly critical

Table 2 Codes used for attribution of responsibility and action

Code 4—coverage of the responsibility for identified climate change

G2	Argues that responsibility for climate change is global and equal
G3	Argues that responsibility for climate change rests with developed countries
G4	Argues that responsibility for climate change is common but differentiated

Code 5—coverage of action and decisions regarding mitigation action on identified climate change

H1	Argues that mitigation action should be global and equal
H2	Argues that mitigation action should be undertaken by developed countries
H3	Argues that mitigation action should be common but differentiated

Code 6—coverage of the Kyoto Protocol

K1	Argues that the Kyoto Protocol is a good policy
K2	Argues that the Kyoto Protocol is a bad policy

Code 7—coverage of specific negotiating countries'/political blocs' positions and actions on climate change

I2	Article shows empathy for other developing/emerging economies
I3/3A	Shows a positive/negative attitude towards the EU
I4/4A	Shows a positive/negative attitude towards the USA
I5/5A	Shows a positive/negative attitude towards the UK
I6/6A	Shows a positive/negative attitude towards China
I7/7A	Shows a positive/negative attitude towards Brazil
I8/8A	Shows a positive/negative attitude towards Japan
I9	Suggests that developed states are facilitating action on climate change
I10	Suggests that developed states are blocking action on climate change

Code 8—coverage of responsibility for climate change within India

L1	Argues that there should be domestic emissions cuts for India
L2	Argues that there should not be domestic emissions cuts for India
L3	Does not mention domestic stratification of Indian responsibility or emissions
L4	Does mention domestic stratification of Indian responsibility or emissions

Of those coded L4: code 9—coverage of potential mitigation by high emitters in India

L5	Argues that there should be emissions cuts by the elite classes in India

of so-called 'climate sceptics', often highlighting the US media in particular as responsible for giving voice to known contrarians.

The journalists were equally unequivocal. All 15 of those interviewed believed that anthropogenic climate change was a reality, citing either scientific or environmental evidence to support their conclusions. Many (nine out of 15) spoke of how they tried to keep up-to-date with academic work on climate science, with one assistant editor receiving a delivery of two mainstream environmental science publications (*Science* and *Nature*) during the interview itself. As with the articles themselves, the certainty about anthropogenic causes of climate change among journalists in India contrasts with many of the findings of research into other mass media. In 2000, for example, Wilson reported that 48% of members of the international Society of Environmental Journalists were aware of the scientific consensus on the anthropogenic causes of climate change (Wilson 2000). A similar study conducted by Sundblad et al. (2008) among Swedish environmental journalists 8 years later suggested that 81% of those surveyed agreed with the same consensus. The agreement of 98% of articles and 100% of interviewees included in this study suggests that the actors in and outputs of mass media in India show an extremely high rate of agreement with the current scientific consensus on the causes of climate change.

An explanation for this distinct pattern was found by analysing the context and wider setting in which climate change was discussed in the English-language press. Climate change was largely presented as an environmental process taking place in India rather than as just a scientific output. 108 articles (44%) directly attributed their certainty about climate change to current, observable environmental change (R1, Table 1), arguing that climate changes were 'underway' in India (*Hindustan Times* 8.xii.2006). The journalists interviewed were similarly 'convinced' that 'climate change is having an impact in India already', with ten specifically mentioning the 'direct linkages' between climate change and recent monsoon disruption. Fourteen out of 15 interviewees suggested that environmental change is evidence for climate change and that those changes were occurring at the present time. Many journalists argued that Indian land and people were 'already suffering' from the impacts of climate change, with one associate editor suggesting that her concern was more oriented towards 'our [India's] own' issues, rather than towards broader climate science findings.

Through this approach, the English-language press in India set climate change up as a socio-environmental issue, rather than reducing it to a distant scientific process (Von Stroch and Krauss 2005). By paying close attention to the environmental rather than scientific aspects of climate change, the press focused their discussions closely on the impacts and risks posed by global warming. This secondary discourse (coded using the A codes in Table 1) used the primary acceptance of anthropogenic climate change already established by the press to develop the view that India is at major risk from climatic changes. As well as using environmental change as evidence for climate change the press created a distinct frame of threats.

189 articles spoke about the specific threats of climate change; 103 of these 189 focused on its impacts in India. Both the interviews and the texts revealed a focus on three, largely rural impacts: 66% of articles referring to impacts focused on falling agricultural output, monsoon disruption, or Himalayan glacial retreat—termed the 'smoking guns' of climate change in India (*Hindustan Times*, 24.ix.2005). The focus on these risks followed a series of high-magnitude environmental hazards

resulting from monsoon disruption and glacial retreat in previous years; in both 2005 and 2007, for example, the disruption to the regular monsoon cycle caused two catastrophic floods in Mumbai and Delhi, killing in excess of 300 people (*Times of India*, 25.xi.2007).

This discourse of 'threat' is further illustrated by the temporal distribution of coding themes (Fig. 1). The distribution of the graph closely follows patterns of environmental disruption within India, specifically the peak in the 'impacts' theme in 2005 and early 2006 during and for the 6 months after the 2005 summer floods in Delhi and Mumbai.

Whether actually related to climate change or not, these environmental patterns— and their human impacts—were perceived and communicated by journalists as 'tragic evidence' of the effects of human emissions in India. Particular focus was placed on the disruption caused to India's spiritual 'affinity with nature'; four journalists spoke of how Hindu sites, such as the Holy Ganges and Brahmaputra Rivers and the Himalayan Shivalingham pilgrimage site, were suffering extensive stress from unprecedented Himalayan glacial melt waters, translating, a former editor-in-chief of the Times of India suggested, into 'bad news for Hindus'. One typical headline published during the interview process read 'Global Warming shrinks Shivalingham' (*Hindustan Times* 28.vi.2007).

Overall, the number of articles covering the science and impacts of climate change account for 58.1% of the entire newspaper sample. The discussion of national threats firmly placed the environmental impacts of climate change inside India's borders, and India was framed by the press as 'under threat' from global climate change (*Hindustan Times*, 22.i.2007). In many western mass media the threats from climate change are presented as being located outside the country's borders, 'othering' them from the national scene (see Von Stroch and Krauss (2005) for the example of Germany); in India, however, it is precisely the effects that are located within the state that define the frame of risk. This placement of threat reflects the wider Indian political position that climate change is a phenomenon caused outside of India but which India is suffering from nonetheless (Farbotko 2005). Climate changes are framed in a national picture of major environmental disruption within a country that believes it did not cause global warming.
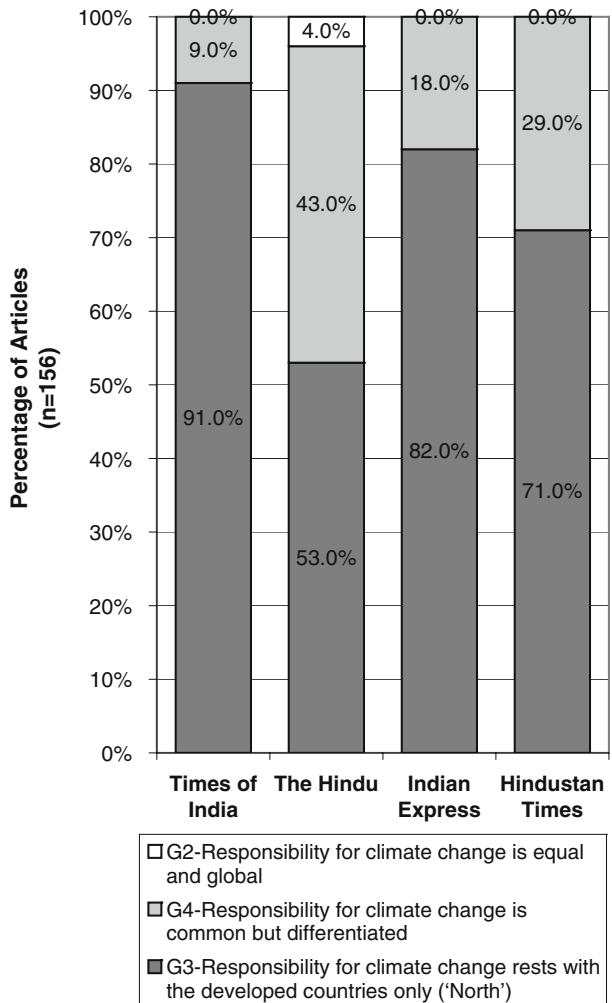
4 Climate politics coverage

This *location of risk* is complemented and extended by India's position on the *location of climate change responsibility*. Having located the threats of climate change within India, the press placed the responsibility and demand for action resolutely outside the country. As noted above, international differences over what to do about climate change are largely founded upon where responsibility for the problem is situated. To assess the Indian press' coverage of these climate politics the coding scheme in Table 2 was used on the article sample, first exploring discourses on responsibility and then on proposed action, if any.

The results from this coding (Fig. 2) indicate that the press further divide what parts of climate change are framed as 'inside' and 'outside' India. 76.3% of the 156 articles concerned with responsibility assigned it to the countries in the 'North'. Many believed that 'developed countries' could not avoid 'the mess they created', and

framed the historical patterns of greenhouse gas emissions as *the* cause for current climate change (*Times of India*, 16.iii.2002). A minority—45 articles, or 28.8% of the sample—presented responsibility as 'common but differentiated'; even these, however, cited per capita emissions to argue that citizens in the North are 'primarily responsible' through 'excessive resource consumption... intended to support their lifestyles' (*The Hindu*, 4.xi.2003).

The focus on historical emissions was used by the press to underpin the dominant discourse on actual 'action', or climate policy (Fig. 3). 38.5% of articles dealing with mitigation believed that only the North should cut its emissions, on the premise that '...developing countries cannot allow their economies to suffer on account of a problem caused by the [North]' (*Times of India*, 21.ii.2007). 55.2% of articles advocated that action should be approached globally but in a differentiated way; while these articles suggested that India could act to mitigate climate change, they
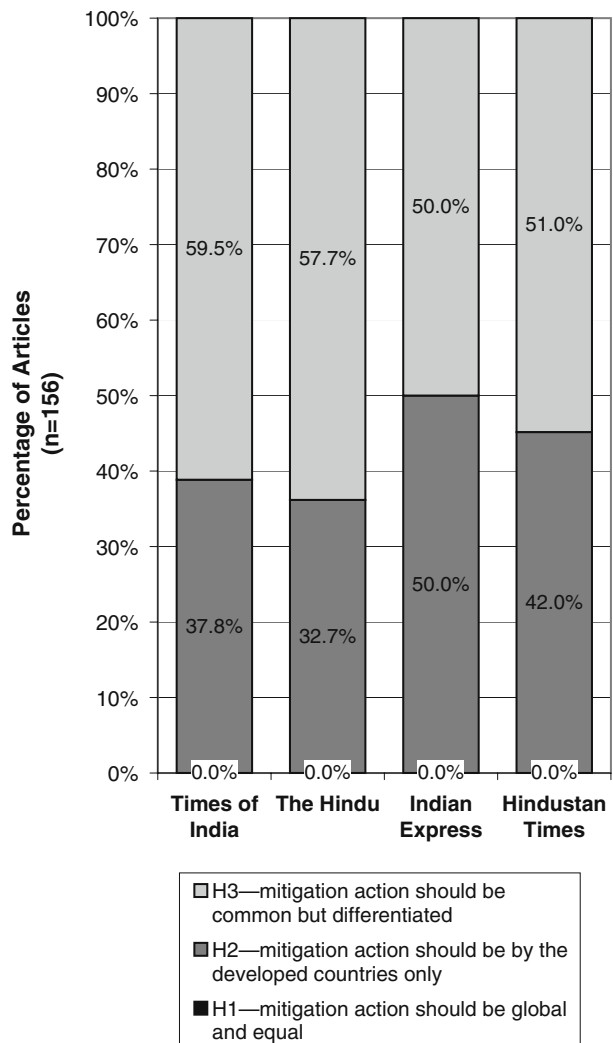
Fig. 2 Distribution of assigned codes on 'Responsibility' for climate change; *n* = 156. The figure shows the distribution as a percentage of only those articles that were found to discuss responsibility

argued that India must instead prioritise its commitments to poverty reduction and economic growth. Indeed, 12 of the journalists believed that '[India] sees [climate change] as its responsibility, but we say that the people who have polluted the world for fifty years can't shirk *their* responsibility'.

The reaction against responsibility and action over climate by the English-language press reflects the wider governmental approach to climate change in India. Climate change is viewed in historical and developmental terms, in which India is not a major twentieth-century emitter and is more focused on its major poverty concerns, echoing Indira Gandhi as quoted above. In this context, current and near-future climate change is framed as not being India's responsibility. Climate change is 'othered' at the international scale in a strongly reactionary narrative that clearly

Fig. 3 Distribution of assigned codes on mitigation of climate change; *n* = 156. The figure shows the distribution as a percentage of only those articles that were found to discuss mitigation of climate change

situates the causes of climate change as a political issue 'elsewhere' (McManus 2000: 11).

This political frame sits alongside and indeed complements the press' discourse on climate science and impacts. On one hand, climate change is recognised as an anthropogenically forced process that is already devastating India, as well as posing a threat for the future inside the country. On the other hand, the responsibility for causing and reducing climate change lies outside India, with the developed 'North'. Climate change is divided between the threat faced by India and the Northern responsibility for this threat: cause outside, effect inside (Lankala 2006). Cause and effect are 'distanciated' along developmental and international North–South lines (McManus 2000: 1).
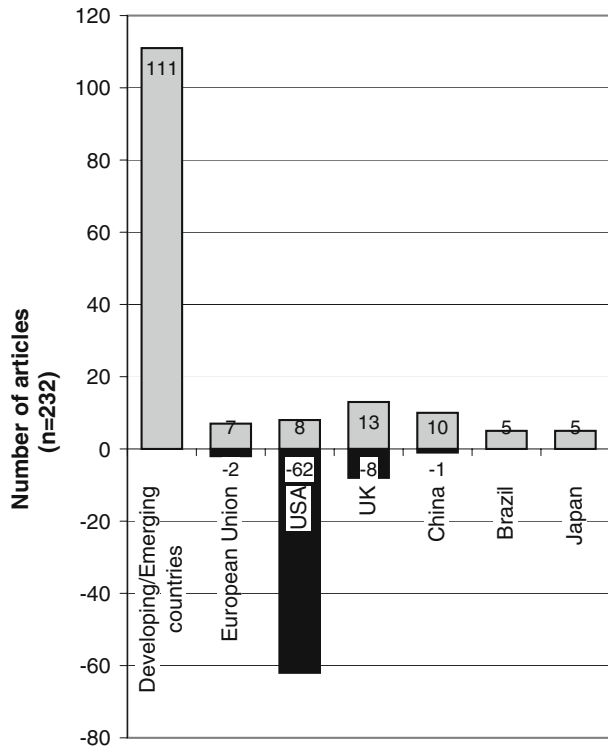
This distanciation is exemplified by the coverage of the Kyoto Protocol by the Indian press. As the only major piece of international climate change policy during the last 15 years, the Kyoto Protocol functions as a 'critical discourse moment' in the coverage—a microcosm of the wider political discourse on climate change (Carvalho 2005: 4; Pielke 2005). Indeed, 67 articles mentioned the Protocol, with the majority portraying it in largely negative terms. 61.2% of articles mentioning the Protocol argued that it was a bad policy for India. Articles referred to the lack of Northern action on reducing emissions under the Kyoto Protocol, as well as to the United States' negotiation of demands for emerging economies to take on emissions cuts, as 'misled and misplaced' (*Indian Express*, 30.x.2002). Indeed, coverage was often accompanied by a discussion of how and why developed countries wanted India to cut its emissions. For one reporter, 'the developed countries don't take responsibility for anything'; instead they create both a 'problem of environment and a problem of policy'.

By framing the Protocol—and so the North's perceived position on climate policy—in this way, the press suggested that international policy is focused on trying to relocate responsibility for emissions cuts to India, even though the Kyoto Protocol actually exempts emerging economies. This sets up a narrative of 'double exposure'—to both the environmental issues and the politics surrounding them—that further inscribes the North–South divisions in the press (O'Brien and Leichenko 2000: 1). According to the English-language press' discourse, not only does India face the threats and impacts of climate change, but it also suffers from an international political effort to create emissions caps for the third world.

To investigate the exact nature of this North–South divide, the article sample was coded (using the I series, Table 2) according to attitudes toward specific countries.[5] Unsurprisingly considering the press' coverage of emissions responsibility, the United States was framed overwhelmingly negatively (Fig. 4). Many articles argued that the USA's lack of action was holding up efforts to reduce the threats India faces, and criticised 'President Bush, the world's most famous sceptic' (*Hindustan Times*, 9.vi.2007). The large number of articles coded in the USA category reflects the press' usage of the USA as the key example of the developed world preventing 'equitable' action on climate change, despite the fact that the USA actually holds the same resistance to emissions cuts as India (Agarwal and Narain 1991). 85.7% of those articles that disagreed with the United States' actions were also coded

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[5]Note: the countries shown in Table 2 and Fig. 4 are those for which there were five or more specific references in the sample.

Fig. 4 International country attitudes in press coverage on climate change; *n* = 232. The figure takes positive attitude codes as positive integers and negative attitude codes as negative integers. The countries used for coding and graphed were those identified to have five or more references in the article sample

'Developed States block Action' (I10, Table 2). Many journalists—particularly more junior reporters—felt that the US position was an example of the North 'not clearing up its waste'.

As well as creating a clear image of the developed world, the English-language press also framed the developing world in a manner that supported the wider discourse. 101 articles (75.9% of those discussing international attitudes) were empathetic towards the situation in other emerging and developing economies. The press framed these countries as being in a similar position to India on climate change, with two more extreme articles arguing that climate change facilitated a form of 'imperialism' that 'pitted India, China, and Pakistan against the developed world' (*The Hindu*, 9.v.2007; *Times of India*, 20.iv.2007).

This frame of southern cohesion or uniformity in both the impacts and policies of climate change extended the international division of risk and responsibility to a global North–South divide that grouped India with other developing nations. One *Times of India* reporter saw such reporting as representative of a 'larger sense of nationalism tied to [climate change]'. An aspect of this 'nationalism' was expressed through a defence of India and its position on the part of the journalists interviewed. The main environment writer at the Indian Express, for instance, argued that the developed world should not be allowed to 'dictate India's policy [on climate change] through lack of action'. Anther interviewee, a free-lance writer, believed that 'India does not need to follow the European way or the American way. India will find its own way'.

5 Coverage of sub-national divides

The strong international focus of articles addressing climate change significantly reduced coverage of differences in domestic responsibility or of the potential for domestic mitigation action within India (L code series Table 2). Considering the stratification of Indian society, particularly the burgeoning per-capita emissions of the industrial middle class in the country, this unequal balance of international- and domestic-focused articles is significant (Ananthapadmanabhan et al. 2007).

Of the 125 articles that mentioned responsibility in India, an overwhelming 92 articulated a united India, making no reference to stratification in emissions or capacity to adapt to climate change. Just 33 articles argued that there was any socio-climatic stratification within India, compared to 164 articles that made that same claim at the international scale. Of these 33, only 20 articles suggested that there should be domestic emissions cuts.

The absence of coverage on domestic stratification, and so on potential climate mitigation within India, reflects the press' use of historical emissions profiles as the foundation for the entire climate change discourse within the country. The focus on historical, international, inequalities in greenhouse gas emissions creates a discourse that is not only biased towards coverage of international divides but also neglects the issue of domestic emissions divides within India—emissions divides that are of the same absolute magnitude as those at the international scale (Watkins 2007: 69). Ultimately, this absence of discussion of domestic issues reinforces the division of climate change across North–South lines at the global spatial scale and colonial and postcolonial time scales.

6 Discussion of the impacts of the Indian discourse

The results from this study indicate that the English-language press' coverage of climate change is based around a divisive allocation of risk and responsibility in a narrative that separates climate change across North–South lines. By defining these clear lines the press created a narrative based on international postcolonial divides, portraying the South as a single, homogenous entity at risk from global climate change. In their coverage of climate change, the English-language dailies sought an authentic 'Indian-ness'—a national position that dislocated Indian emissions from the global political discourse of responsibility by focusing on risk (Young 2003: 62), ultimately 'distanciating' cause and effect in the climate change debate within the country (McManus 2000: 1).

The implications of this discourse for the wider public understanding of climate change in India are two-fold: at both the international and sub-national levels, the use of a purely nationalistic, unified frame obscures the increasing nuance in the climate change debate.

At the international level, the dominance of the North–South frame obscures the complexity of international climate negotiations. In terms of attitude towards the United States, the press placed the USA's role as a developed state and heavy GHG emitter above its position of resisting domestic emissions caps—a position it shares with India. By largely ignoring the common USA-India aversion to

Kyoto-style regulation, and instead placing North–South differences at the forefront, the papers reinforced international divisions in the causes and effects of climate change.[6]

At the sub-national scale international 'othering' is combined with a lack of discussion of the postcolonial stratification of society that exists within India itself. The nationalistic discourse largely ignored the wide differences that increasingly exist between those who have benefited from India's recent growth and the rural poor who have inherited its environmental legacy (Watkins 2007; Mawdsley 2004). A process of international 'distanciation' in the discourse detracts from discussions about the socio-economic divisions that exist within India (McManus 2000: 1). In addition, the historical and per-capita focus of the newspapers' coverage portrays a situation where *illegitimate* and *legitimate* emissions exist, differentiated by their country of origin and divided along global North–South lines, actually justifying rising emissions in India. In one journalist's words, India feels like it should be 'allowed [its] turn at the party'.

At both the international and sub-national scales, then, the coverage of climate change by the English-language press in India re-frames the climate change debate around a nationalistic argument of 'us' versus 'them', at the expense of other key issues in the debate.

6.1 The role of the media in climate change in India

The coverage of climate change by the English-language press highlighted in this paper is clearly related to the readership of these newspapers in India. As publications written in English, these four newspapers automatically target and reach a readership that is restricted to the upper sections of society. Because of the vertical social stratification that continues to exist in India, the English-language dailies serve only this one elite layer, communicating climate change in a manner that responds to the private sphere whose values and concerns they up-scale (Sonwalkar 2002). The free-lance writers interviewed suggested that like in any mass media 'each publication caters to its audience', and so in the case of the English-language press in India the 'media essentially reflects elite perceptions'. According to one reporter, this means that the papers 'pick climate change up, play with it when [the elite] want them to, or not when they don't want to'.

By creating a discourse of international 'carbon colonialism', the papers simultaneously articulate a 'nationalistic narrative' that presents India as socially homogenous while 'backgrounding' the increasing emissions of the industrial elite within the country (Fernandes 2000: 2; Plumwood 2003 *in* Adams and Mulligan 2003: 56). The national circulation of these newspapers, unique to them within the Indian media, reinforces this focus on a national frame. Spatially, the English-language dailies do hold the 'national' view (in fact, several journalists claimed to 'hold fort for the rest of the nation'), and so have a unique 'self-proclaimed right to define the nation'

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[6]The Indian press have been found by Lankala (2006) to use a similar discourse in their coverage of terrorism, and of the US intervention in Pakistan, in the aftermath of September 11; by arguing that the US should not intervene in south-Asian states (instead of perhaps highlighting India's and the USA's similar stance on terrorism) the press prioritised the national/nationalistic and developmental frames over that of potential policy agreement, drawing fixed lines of international division.

(Rajagopal 2001: 158; Parameswaran 1997: 6). In this context, as one free-lance writer lamented, the 'contributions of the industrial elite [to India's rising emissions] are papered over, lost sight of—denied altogether'.

On one hand, the Indian media present climate change in a far more scientifically representative frame than many Western media have done, almost completely depoliticising the question of the existence of climate change (Boykoff and Boykoff 2004). However, this depoliticisation of science is replaced by a highly contentious political frame that defines attitudes towards climate policy-making. The 'normative assumption' that there is a neo-colonial desire to suppress India's growth through unrestrained climate change impacts and restrictive policy has fuelled a nationalistic reaction in the press that reinforces the non-compliance of India and its public with any binding emissions targets (Power 2003: 136–137 in Radcliffe 2005: 6). Such an assumption sets imminent post-Kyoto climate negotiations in India within a less-than-compliant—and less than ideal—context of public discourse in the country.

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