climate policy

synthesis article

Climate policy and financial institutions

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This article examines how financial institutions, such as pension funds and insurance companies, have interpreted and used UN-issued climate change management policies. A critical discourse approach is used to analyse material issued by the United Nations Framework Convention on Climate Change, the World Bank Group and some business and investment consultancies, with interview data supplementing the document analysis. It is argued that although policymakers and business consultants have been eager to appropriate the discourses of financial services, they have not produced guidance on how the outputs of climate science might best be used to allocate managed capital. In terms of outcomes, financial services remain on the periphery of policy implementation, attention has been deflected from the emitters of greenhouse gases, and policy objectives have been frustrated. By unspoken fiat, the market is here the new truth that cannot be contradicted.

Keywords: carbon finance; climate change; critical discourse analysis; financial institutions; United Nations; World Bank

Cet article examine comment les institutions financières, telles que fonds de pension et compagnies d'assurance, ont interprété et utilisé les politiques du changement climatique délivrées par les Nations Unies. Une approche critique du discours est utilisée pour analyser des documents publiés par la CCNUCC, le Groupe de la Banque mondiale et certains cabinets d'affaires et d'investissement, avec des données d'interviews complétant l'analyse des documents. Il est soutenu que bien que les décideurs et conseillers en affaires ont été désireux de s'approprier le discours des services financiers, ils n'ont pas fourni de directions à la mesure de la politique climatique quant à la meilleure façon d'appliquer la science sur le climat dans l'allocation des capitaux en gestion. En termes de résultats, les services financiers restent à la périphérie de la mise en œuvre des politiques, l'attention a été détournée des émetteurs de gaz à effet de serre, et les objectifs politiques ont été frustrés. Par autorisation tacite, le marché est devenu une nouvelle force qui ne peut être contredite.

Mots clés : analyse critique du discours; Banque mondiale; changement climatique; finance carbone; institutions financières; Nations Unies

1. Introduction

Climate policy, to judge from lobbyists, academics and insurance companies, has bypassed privately managed capital (Dlugolecki, 2009; European Climate Foundation, 2009; Hamilton, 2009; Harvard, 2010; The Global Climate Network, 2010). Most appeals by climate change policy makers for additional financial resources have been directed at citizens, civil society organizations and individual corporations rather than privately managed financial institutions such as pension funds and insurance companies. The positions of financial institutions, relative to climate policymaking and to the polluting companies in which financial institutions invest, have not been articulated clearly. Although policy makers have called for greater involvement of private finance in climate management, the US$74.3 trillion managed by hedge funds, pensions funds and insurers in 2007 dwarfed, in the same year, the mere

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US$9.5 billion estimated in greenhouse gas (GHG) emissions rights and project-based mechanisms (Capoor and Ambrosi, 2008).

Lobby groups of investors and non-governmental organizations (NGOs) – such as the Institutional Investors Group on Climate Change, P8, Climate Wise, the Climate Institute and the Carbon Disclosure Project (CDP) – have claimed that their work provides evidence of the strategies deployed by investors in relation to climate change,[1] while at the same time, complaints have surfaced from some of these groups about the absence of relevant metrics, policy guidance and participation in public climate management programmes (e.g. CDP, 2010, p. 6). What might account for this? This article seeks to answer this by identifying how public policy makers and institutional investors have used the outputs of climate science, and examining the discursive nature of the communications between the two groups.

It has been noted in the climate change management literature that there has been a coincidence of frustrated communications between policy makers and policy implementers, and power struggles between supranational bodies, national governments and the business sector (e.g. Livesey, 2002; Levy and Egan, 2003; Lohmann, 2005; Bäckstrand and Lövbrand, 2007). Elsewhere, it has been noted that business, relative to public policy, has sought to dictate its own terms and, on occasion, the policy agenda (Chiapello and Fairclough, 2002). However, the manner in which climate change policy negotiations have been conducted has not received focused comment. Given the intimate relation of climate (change) policies on the market, it seems apposite to investigate the ways policy makers and one particular group of potential policy implementers, investment institutions, have communicated with each other. The nature of policy communications is examined using a distinctive feature approach, a critical discourse tool that analyses the structural components of a text for its meaning 'beyond the text'. The texts chosen for analysis have been important in disseminating both the outputs of climate science to policy makers and the outputs of policies to the managed investments sector. A series of interviews is used to clarify and complement the text analysis. Interviewees included staff at the World Bank, the UN, and some NGOs and investment banking institutions.

It is concluded that the language shared between the United Nations Framework Convention on Climate Change (UNFCCC) and the World Bank frames climate management in terms usually reserved for consumption and business growth, such as 'low-carbon growth opportunities'. Material produced from some interpreters of climate policy operating in the financial services sector also exhibits an 'opportunism' discourse, concerned with such things as 'revenue opportunities'. The significance of climate events is uniformly expressed in terms of threats to the accretion of economic wealth, and how those threats can be managed away.

It is of great concern that all the discourses identified in the analysed texts – sustainability, individualism, material consumption, progress through financial instruments, opportunism and managerialism – work to deflect attention from the emitters of GHGs. The findings suggest that both policy formulation and implementation are isolated from climate policy, which is rooted in the objectives of carbon emissions mitigation and climate change adaptation. The outcome has been the frustration of policy objectives that companies achieve reductions in the levels of their carbon emissions, and societies adapt to the effects of climate change.

The article is structured as follows. In Section 2, the analytical approach is sketched and data sources and collection are described. In Sections 3 and 4, the discourses of policy makers and those of the managed investments sector, and the ways these discourses cross each other and produce new discourses, are discussed. In Section 5, the connections between discourses are schematized, and some remarks are offered on the potential for directness of communications.

2. Analytical approach and data collection

The empirical task of this article is to identify which discourses are shared between climate science, policy makers and institutional finance and to identify the emergence and significance of any super discourses. Foucault (1996) uses the term 'discursive formation' to describe the ways in which two or more fields of practice influence and shape each other's discourse. The domains of public policy and institutional finance might be considered two nodal points (Fairclough, 2005) of a discursive formation called 'climate management'. Other nodal points are climate scientists (the producers of climate change data) and lobbyists and NGOs, the latter being both advocates and challengers of specific climate change policies.

It has been proposed in the critical discourse literature that interdiscursive analysis may be a fruitful line of enquiry regarding policy networks (e.g. Vološinov, 1986; Evans, 2001). 'Interdiscourse' means 'an approach that identifies how certain kinds of discourses are related to other kinds of discourses'. The analysis is facilitated by combination of the social ontology offered in Vološinov (1986) and the approach to the social subject offered by Foucault (1996). Critical discourse analysis for Vološinov, as for Fairclough (2005), means to grasp the totality of social relations in its situated concreteness. The rationale for selection of the approach offered by Vološinov (1986) is its ability to handle communications between particular domains of truth and knowledge. In climate policy, such domains are represented by the scientific community (with its own language and signifiers of truth), the political sphere (with its own objectives and systems of legitimation) and the business and finance communities (again with their own systems of legitimation). Vološinov offers a frame of analysis that can be used to identify and trace the justification of legitimate authority, of interest in analysis of climate policy communications.

Vološinov's framework is based on the functions of language and sign use as expression, the interpretation of the expression, and how the listener takes up the message of the speaker (1986, p.112). This three-part conception fits with a threefold communicative framework in classical rhetoric comprising the interaction between a speaker (or writer), a text and an audience (reader). Analytical attention is directed towards changes in the modes and styles of language use between the speaker, the text and the audience. The objective of interdiscursive analysis is to characterize the communicative processes of discourse, including identifying where an element from one discourse is used as an element in another. This borrowing or transfer is called 'interdiscursivity' and can give rise to establishment of a 'super discourse', which works 'behind the text', framing the actual words of a set of communications in terms of the meaning system of either the speaker or the interpreter (Foucault, 1996).

The 36-month period of November 2006 to October 2009 was chosen, as it represented a period of intense attention directed towards climate-related issues by policy makers, the media and the financial and business sectors. Much of this attention is likely to have been associated with the scramble of negotiations in the lead-up to the Fifteenth Conference of the Parties (COP15) of the UNFCCC, held in December 2009. Data were gathered from three main sources: (i) reports issued in the public domain; (ii) interviews with staffers of the World Bank and private institutional investors in North America, Europe and Australia; and (iii) participation in nine climate-policy-related meetings of business professionals, academics and policy makers held in 2009 in Europe.[2]

A sample was examined that comprised nearly 200 documents issued in the public domain. Some of these documents were selected for in-depth examination on the basis of their importance in climate policy formulation. An impression of the importance of other documents was formed after identification of certain documents referred to frequently in financial services. Seven documents from the sample were selected for in-depth examination.

The author is a member of the UN Principles for Responsible Investment Academic Network (http://academic.unpri.org) and the Network for Sustainable Financial Markets (www.sustainablefinancialmarkets.net). These networks were used to procure 44 individual interviews. Interviewees were selected on the basis of their membership in the scientific, policymaking and business communities, coupled with their interest in climate policy and/or carbon emissions management programmes. Interviewees included current and former staff at the World Bank and the UN, some nongovernmental lobby organizations, banking groups, pension funds and insurance companies in Europe, North America and Australia, as well as certain governmental agencies that have encouraged (and in some cases required) financial institutions and businesses to disclose information on climate-related strategies. Interviews were conducted in 2009, in person, by telephone and by e-mail. On occasion, repeat interviews were conducted to clarify points in the initial discussions. Notes, and on occasion transcripts, were made of the interviews (and are available on request to the interested reader).

The article does not attempt to analyse the climate policy negotiations between governments and industry lobby organizations representing sectors other than the financial services. The scope of analysis is restricted to the ways in which climate policy has been used in institutional finance. After completing an interdiscursive analysis of the selected material, these sources were again reviewed to determine if alternate texts were more illustrative of the discourses. No reason was given in this subsequent review to suggest that selecting other material would significantly affect the analysis of the discourses presented here.

3. Climate discourse in the policy arena

Texts produced by the World Bank Group and the UNFCCC are analysed in this section. These sources are considered significant, as the World Bank represents an important conduit of the UNFCCC-formulated policy made pursuant to Kyoto Protocol obligations. Two World Bank documents are analysed and are considered first.

3.1. The World Bank

3.1.1. State and trends of the carbon market 2008 (by Karan Capoor and Philippe Ambrosi of the World Bank)

The wide dissemination of the work by Capoor and Ambrosi (2008) is indicated by its frequent citation in other documents produced by the World Bank, the IPCC, the UNFCCC, in financial services and in the financial media. A search on the Internet yielded 6,690 hits using Google Search and 604 hits using Google Scholar (7 December 2009).

Capoor and Ambrosi (2008) describe the development of GHG emissions trading markets. The article contains examples of the typical kinds of phrases and arguments used by the World Bank in its documents. Phrases such as 'clean energy projects', 'sustainable development', 'sound', 'road-tested technology', 'climate-friendly investment', 'carbon market momentum', 'at a crossroads', 'time to re-think' and 'the forest for the trees' appear as subtitles and in its executive summary. Hence, it is considered that such phrases are important in this document. Moving beyond the introductory sections, the language of the text becomes authoritarian and coercive while retaining a progressive tone. Titles such as 'The New Face of EU ETS Phase II' and 'The Road to Copenhagen' preface text that contains phrases such as 'global cooperation on climate change' and 'harmonization with market participants'. The modalities (expressions of how climate policy should be) of these textual items replicate some of the market-infused language appearing in the text's introductory sections. The speaker (the World Bank) uses this phrasing to convey a mood (Van Dijk, 2006) which the reader can interpret in

context to mean that the solution to climate change is the market. (Use of signs of material progress and consumption to promote a programme of GHG emissions mitigation can be found in the origins of the UK and European GHG emissions trading schemes (ETSs), an outline of which is provided in the Appendix.)

3.1.2. Carbon Finance for Sustainable Development

Issued in 2007, World Bank (2007) is a 96-page report issued by the Bank's Carbon Finance Unit and can be treated as a document that belongs equally to policy communications and policy implementation. The document supplies a series of synopses of financing programmes launched pursuant to the Clean Development Mechanism that was introduced by the Kyoto Protocol.

The device that Vološinov (1986) terms 'quasi-direct discourse' – the taking up of another's speech in one's own – is pervasive here. The basic philosophical assumption of Vološinov, on whose work the present approach is based, is that non-discursive and discourse elements are both parts of the discursive realm. Non-discursive aspects (e.g. theories of social justice, in the case of climate policy) are 'translated' by Vološinov into the terms of discourse analysis. This is not part of an argument that all social change occurs through discourse. Social change can occur through the choice of a different perspective. The translative effort is made, rather, so as to identify the dispersion and distribution of valid knowledge. The meaning of, for example, scientific knowledge is identified by examining how its elements are articulated and re-articulated into the receiving discourse.

A focused analysis of a single page of *Carbon Finance for Sustainable Development* (World Bank, 2007) is now given. Page 8 is entitled 'Avoiding Dangerous Climate Change', which serves as the page's theme. Using a combined comitative–contrastive structure, the page divides visually into three horizontal sections. The following is an excerpt from a text box in the top section:

> 'Warming of the climate system is unequivocal, as is now evident from . . . increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level.' (IPCC, 2007)
> (quotation marks, ellipse and citation in the original)

Although the quotation marks surrounding the sentence in the extract above would classify the extract as direct discourse, in the sense that the text appears to be spoken by its author (the IPCC), the box that surrounds the text and the citation transforms the extract into 'quasi-direct discourse', referring to the taking up of another's speech into one's own (Vološinov, 1986). According to Vološinov, the incorporation of the speech of the other necessarily transforms it by giving it an intonation or an evaluation that it did not previously possess. At this point in the text, the World Bank as author of the reported speech takes an element from a discourse belonging to the IPCC and uses that item as an element in another discourse.

The headline 'What We Should Know' (in bold in the original) prefaces the middle section of page 8. The headline is in a green-coloured font, which serves to contextualize the theme and to link it with the preceding section (Machin, 2007). The text under the headline divides into two columns of nine bullet points. The first bullet gives the theme:

> The Intergovernmental Panel on Climate Change (IPCC) 2007 report states that warming of the climate system is unequivocal and mostly due to human activities.

This is a second instance of quasi-direct discourse. The quasi-quotation in the top section is set typographically as prose; the bullet point below simply reiterates. The contrastive effect works to underline the authority of the IPCC and to establish the reality of climate change and climate change impacts as unarguable.

The four bullet points that follow supply problem-setting information. Material taken from other IPCC- and UNFCCC-issued material is treated as direct speech; that is, it is placed inside quotation marks as if someone is speaking, and written as if from the IPCC. The emphatic language used in these four bullet points serves to confirm the connections between climate changes and the fate of humanity.

The next set of four bullet points (World Bank, 2007, p. 8) supplies solution-seeking questions. The pairing of problem setting discourses and problem solution providing discourses is a common rhetorical device, one that can admit the ideology of the 'solutions provider' – in this case self-represented by the World Bank. By posing a question as to the 'framework' by which GHG emissions might best be reduced, a causal link is made between global warming observations and industrial activity. However, a modal clause is appended – 'It should generate significant investment resources to help developing countries grow' – serving to deflect attention away from the association of industrial activity with levels of atmospheric pollution. The choice of how best to deal with environmental crises is instead framed in a double contingency, 'Whatever the framework . . . it should generate investment', and an appeal to our moral conscience, 'Should . . . help developing countries grow'.

The next bullet point provides a method by which pollution levels might be reduced – 'Framework for reducing greenhouse gas emissions' – introduced by the clause 'Underlying the carbon market is a simple fact'. This phrase works to dispel doubt that the best solution for the multifarious problems caused by global warming is a market-based ETS.

Adjectival language then appears, colouring a market solution as bold and brave and something with which the reader can personally identify: 'The carbon market is emerging as a powerful tool'; 'Transfer financial resources and clean technology to the developing world'; and 'No matter where on the planet you reduce greenhouse gases'. The final two bullet points deploy anaphora (i.e. the repetition of both content and style) and jargon. Compound nouns are used, such as 'the carbon market', 'carbon finance' and 'low-carbon development goals', in a way that associates industrial activity with humanitarian concerns. Thus, climate policy in the hands of the World Bank is framed in terms reserved exclusively for economic markets.[3]

A second heading, appearing in the central section of page 8, 'The Challenge Ahead', announces two paragraphs written in prose style that repeat much of the preceding bullet-pointed information. This contrast in style works to emphasize the imperative of economic development as the solution to climate change. With a shift of tense from third- to second-person, the text here casts humanity as victims: 'Time is working against us', 'The IPCC 2007 report shows' (World Bank, 2007, p. 8). This is a third instance of quasi-direct discourse. By underlining the 'voice' and authority of climate science, it introduces a note of fear and panic within an imperative of ecological modernization. Importantly for the way the page is read, that voice is spoken by an international investment bank.

The bottom one-third of page 8 is occupied by a text box outlined in green. A single coloured image occupies the left half; the right half consists of text set against a green-shaded background. Figure 1 shows a monochrome representation.

Figure 1 contains another instance of quasi-direct discourse, using as above, the IPCC's main public policy document (IPCC, 2007). The heading 'A Sense of Urgency' maintains the note of fear introduced in the central section of the page. Dire warnings are given on the possibility of human catastrophe piled up on ecological crises in equatorial areas.

FIGURE 1 Carbon Finance at the World Bank

Source: http://wbcarbonfinance.org/docs/annualreport2007_fullreport.pdf, accessed 21 July 2009. Formatting approximates the original.

The juxtaposed image is analysed following an approach that considers how signs are used in combination. It is the relation between signs, between represented and representing speech, which for Vološinov (1986) describes the passage and maintenance of systems of power. The unreferenced image of what might be the end of an ice shelf collapsing into an ocean works as a particularizing synecdoche, making a visual statement of the global scale of environmental change. Its effect is to place emphasis on the heading 'A Sense of Urgency'. The action of falling pack ice is suggested by an apparent cloud of vapour and ice over the surface of a body of green water. Whether this is as a result of climate change is not stated in the document.[4] The image underlines a threat appearing in the text's modal anaphora: 'Sea level could rise . . . could threaten the existence of small island states . . . agriculture could be reduced . . . 40% of species could face extinction'. The meaning of the image is realized in a visual grammar (Machin, 2007: ix) allowing identification of the social and power relationships (Foucault, 1996) between the World Bank Group and, for example, 'the millions of people living in low-lying areas'.

World Bank (2007) uses a contingent discourse of material wealth in another discourse of social, environmental and economic sustainability (the distinctions are blurred). On this basis, it is here concluded that the World Bank draws on a managerialist discourse, which itself merges three discourses: a sustainability discourse, progress through financial instruments discourse, and a material consumption discourse.

3.2. The UNFCCC

Two UNFCCC-authored documents are analysed: *Investment and Financial Flows to Address Climate Change* (UNFCCC, 2007) and an update report (UNFCCC, 2008b). Both documents are aimed squarely at financial institutions and the managed investments sector. The Forewords and Executive Summaries of both documents are examined for several reasons, including the premise that these sections represent spaces for direct, intimate communication between the authors and their audience (Van Dijk, 2006). A foreword and an executive summary section conveniently represent rich, condensed stores of information. A foreword can contain valuable rhetorical information in itself; it informs the framing of the text it introduces and can be used to identify any promulgated discourses.

The first of three passages is from the Foreword to the 273-page UNFCCC document (UNFCCC, 2007):

> The spectre of climate change that is unfolding now is undeniably a cumulative impact of anthropogenic interference in the climate system over the last two centuries. The science is clear and the policy community is being increasingly convinced and galvanised into action to address this emergent challenge in light of the associated economic and human dimensions. (p. 3)

The use of the metaphorical 'spectre' and 'galvanised into action' shows that this passage is rhetorical and indicative of a discourse. A threatening tone and a sense of urgency are introduced at the beginning of the extract. The adverb 'undeniably' couples with the conjoined clauses 'the science is clear and the policy community is being increasingly convinced' to persuade the reader of the credibility of predictions of climate-related natural catastrophes.

The second sentence part is an example of quasi-indirect discourse. Material from the IPCC and the unnamed policy community is presented as the author's (i.e. the chair of the UNFCCC) own words. The purpose of the reaccenting is made clear in the Executive Summary immediately following the Foreword, which reframes the authority and gravitas of an august body of scientists (i.e. the IPCC) in terms of finance flows.

> 14. Investment and financial flows for mitigation in developing countries are likely to be particularly cost effective. While investment flows in non-Annex I Parties are estimated at about 46 per cent of the total needed in 2030, the emission reductions achieved by the countries amount to 68 per cent of global emission reductions. (p. 7)

The phrase 'in light of the associated economic and human dimensions' (which immediately precedes this extract) is given a new meaning. The phrase 'economic and human dimensions' is not taken to refer to threats to economic systems *and* human communities. Rather, the Foreword and Executive Summary, which frame and summarize the document, can be read as advocating that humanitarian concerns brought by climatic change are best addressed through economic means, that is, the financial apparatus erected under the auspices of the Kyoto Protocol (UNFCCC, 2008a). This is a discourse of humanitarian progress through economic progress, made possible by financial instruments.

The final passage presented here is taken from the Foreword to the 116-page UNFCCC update report (UNFCCC, 2008b):

> This publication ... moves forward the discussion on climate change financing from the broad outline of investment and financial needs provided in the previous report to a clear picture of the options, tools and mechanisms that must be put to use if we are to finance an effective response to climate change. (p. 7)

The expressions 'clear picture' and 'tools and mechanisms' point to the imperative 'must be put to use'. The message is that debate is no longer needed, but action is ('moves forward'). The collective pronoun 'we' promotes identification with a team formed to fight a threat. Discourses emerging here are managerialism and, again, progress through financial instruments.

This borrowing of discourse is called interdiscursivity. The typical outcome is establishment of a super discourse. A super discourse merges elements of discourses to come into being and function.

The UNFCCC-issued material displays several super discourses. The managerialist discourse merges three discourses: a sustainability discourse, a progress through financial instruments discourse, and an economic growth discourse. Discourses of ecological efficiency (or sustainability) and humanitarian-inflected economic growth are combined to produce an imperative, commanding discourse (Foucault, 1996) that makes an appeal to intellectual authority and moral consciousness.

4. Climate discourse in the business sector

4.1. Interviews

Interview data collected for this article suggest that, in line with a number of recent survey studies (e.g. NAIC, 2010), climate policies have neither been understood nor taken account of by the managed investments sector. In June 2009, the author participated in a telephone conference on the subject of climate risk between academics, pension fund lobby groups operating in North America, and European institutional investors. It was concluded in that meeting that pension fund trustees 'needed to be educated on the basics of climate change' in line with their fiduciary duties to preserve pension savings. Material provided in investor workshops on climate change and environmental issues attended by the author in Europe in 2009 displayed a very different type of climate terminology to that appearing in the climate science and climate policy communities. Mention of such terms as 'climate change' and 'global warming' was most often framed by phrases such as 'market opportunities in what we believe', 'stress-testing the asset allocation on climate change', 'an alternative way of fuelling our modern lifestyle' and 'sustainable alpha' (i.e. better than average income-producing performance), which, for example, 'can add value across investment styles'.[5]

The following two interview extracts suggest that awareness of climate risks in the managed investments community is limited.

> I have been involved in advising boards of pension trustees for thirty years. Boards are interested in one thing and that is paying off their liabilities. They are looking at absolute returns, not on hedging risks and showing concern on this and that issue, but on having sufficient funds to pay off their liabilities. At any rate, on the factual accuracy of climate change, 95 percent of workers in the City of London don't get it and aren't about to get it. (Fiduciary)

> I'm aware of the IPCC stuff of course, but I haven't read it. Are there any reports being sent around for people to read? (Consultant)

The following passage is extracted from an email interview conducted with a member of the Network for Sustainable Financial Markets.

> If we can gain assurance from some tough government planning decisions that help ensure climate-friendly investments pay a good return for pension funds, then net extra investment in sustainable energy technologies is a huge financing opportunity. It would be a good thing to nut out. (Lobbyist)

The extracts above all suggest that recognition of climate change is viewed as legitimate only to the extent that it will increase profitability. A manager of a self-labelled 'climate-ready' suite of investment products, offered in the European market, was queried for this article on the contribution he expected his products would provide to GHG emissions mitigation. 'It's an interesting perspective', was the reply, 'but it's not part of our approach'.

None of the interviewees were aware of reports produced by the UNFCCC and the IPCC for the managed investments section, for example, the condensed summary report produced by the IPCC (2007) and the UNFCCC reports analysed in the previous section. Only one of ten presenters at various climate-themed investor workshops in 2009 interviewed for this article knew the meaning of IPCC-produced terminology such as 'mitigation', 'adaptation', 'greenhouse gas stabilization concentrations', 'anthropogenic warming' and 'global warming potential'. None was familiar with scientific predictions of the likely future impacts of global warming on water and food systems, coastal areas and human health.[6]

4.2. Lobby groups and consultancies

The remaining analysis in this section is taken up with three reports issued by, respectively, the Carbon Disclosure Project (CDP), The Carbon Fund and, jointly, the World Wide Fund (WWF) and Allianz Group. These documents have been chosen to represent the ways climate policies have been received by lobby groups and consultancies that provide climate policy-related services to the managed investments sector. Since 2002, CDP has ranked the ways in which the largest listed companies manage their carbon emissions. The Carbon Fund is a US-based business lobby group. The WWF and Allianz have jointly issued interpretations of climate science reports, national climate change policies, Kyoto Protocol requirements and related World Bank activities, for the global managed investments sector.

4.2.1. The Carbon Disclosure Project

The CDP's assessment and communication of listed companies' carbon management is treated here as constituting a discourse. The CDP has followed a practice of sending annual information requests of companies appearing in the world's most popular stock indexes, such as the Global Financial Times 500, Nikkei, Standard & Poor's 500, FTSE 350 and ASX 200. The CDP information request addresses a company's energy uses. The CDP uses the completed (and uncompleted) information requests to rank the carbon management of companies in a 'Carbon Disclosure Leaders Index'.[7] Construction of the index involves calculation of a score based on the percentage of questions a company answers in the information request, and a separate calculation of a company's carbon intensity score, which is based on the company's reported GHG emissions.[8]

Data used in the analysis, which follows below, were gathered from CDP reports issued in 2007 and 2008, first-hand interviews with advisors to the CDP, and a database containing the data returned in CDP information requests over the 2002–2008 period and purchased from the CDP.[9]

Put simply, CDP's construction and rankings of carbon intensities favour larger companies. Given two companies that have emitted equivalent amounts of equivalent carbon dioxide (CO_2e) gases over a given period, the company that has produced the greater accounting revenues in that period will be represented as a more efficient carbon emissions manager. Calculation of the intensity score begins with distinguishing GHG emissions resulting from a company's revenue-generating operations. The International Standards Organisation (ISO), which has issued authoritative guidance in this area, refers to these emissions as 'Scope 1 emissions'. Other types of emissions taken into account are emissions resulting from purchased electricity (Scope 2). Emissions related to employee travel, distribution networks and suppliers (Scope 3) are excluded. These distinctions are also used in the Greenhouse Gas Protocol Project Quantification Standard, a voluntary industry standard.[10]

As an illustration, Royal Dutch Shell plc (listed on the New York Stock Exchange under the ticker 'RDS.A') disclosed in its CDP information request of 2007 that it had generated 92 million metric tonnes of carbon dioxide-equivalent emissions in that year (Scope 1). Shell's emissions divided by its consolidated annual accounting revenues (US$433.9 million) gives a result of 212. That result,

expressed relative to the oil and gas sectoral average direct carbon intensity of 435, gives a ratio of 0.4873, which is Shell's carbon intensity score for 2007. This score was used by CDP to represent Shell as less than half (48.73%) as 'carbon-intense' as its peers. The 'result' is an artefact of method and, in this case, disguises the company's actual performance. Shell's GHG emissions in 2007 exceeded the average emissions of companies in the oil and gas sector of the Global Financial Times 500 index (33.8 million tonnes) by a factor of 2.7.

Carbon intensities can be expected to be of interest to CDP investor signatories, as a more efficient carbon manager represents a lower risk to an investor in terms of exposure to possible future expensive mitigation and adaption requirements. Dividing only Scope 1 carbon tonnages by revenues, however, is not advocated in accounting guidance found in ISO Standard No. 14064, nor in the Kyoto Protocol.[11]

The observations above challenge the claim by the CDP that its work has contributed to the abilities of investors to gauge companies' exposures to climate-related risks. Deflation of self-disclosed GHG emissions volumes by corporate revenue figures can divert attention from heavier GHG emitters. Quoted GHG emissions intensities can be used to support the view that it is heavy polluters that represent more promising investment potential, and other measures of GHG emissions management can be used to support the view that it is heavy polluters whose pollution management needs to be improved.

Can it be expected that such anomalies of representation would not be noticed by readers of CDP's reports? The Carbon Disclosure Leadership Index of 2008 (CDP, 2008) correlated lower-quoted emissions intensities (that is, better emissions managers) with higher profits relative to assets, yielding, quote, a 'win–win solution'. Perhaps the significance of the discourse lies in its utterance rather than its use. A consultant who had participated in compilation of the Carbon Disclosure Leadership Index was asked how she would expect investors to use the reports. Her reply was:

> If it has a number in it the analyst can usually plug it into their [sic] model as an additional cost. Many don't even look at the CDP rankings, to be quite honest, they just use it for information, for a general decision making feeling, whether or not it's a comfort type of thing. (Analyst Y)

As a discourse item, the reporting of GHG emissions and revenue-adjusted GHG emissions intensities encodes scientific data for investment analysis, which is here characterized as 'a discursive transfer' and 'an interdiscursive process'.

The reporting brings a meaning where more can mean less: here, a company's relatively high levels of GHG emissions in a particular sector can indicate superior carbon management performance in that sector. GHG emissions, so transformed, have the potential to be associated with both efficient and inefficient environmental management, dependent on revenues. This is an example of 'discursive interference'. The author of the speech has altered the referent[12] from GHG emissions tonnages to an accounting measure with which financial institutions are familiar and might use to interpret companies' GHG emissions tonnages.

Other material produced by the CDP uses rhetorical language such as 'implications for shareholder value', 'a rational response to climate change', 'incentives for individual management', 'exploit the risks', 'assessment of your value chain' and 'part of your mainstream strategic decisions'. These items are 'ideological', in the sense that they represent the market as an efficient environmental manager and controller of investment risk and an effective generator of returns on investment. The data gathered exhibits a discourse of opportunism, combined with an encoding rhetoric that borrows from an investment analysis discourse.

4.2.2. The Carbon Fund

Figure 2 provides six images embedded in material issued by The Carbon Fund, a North American business consultancy. The material considered is indicative of the North American business sector's interpretation of national climate management policies from the period 2006–2009.

A hopeful and individual responsibility tone of the largest-sized image in Figure 2 is conveyed by the imperative mood of its invitation to entreat: 'Let's Get Started'. An ownership and individual agency ideology is entrenched by a slogan, using modal verbs and conveying an action-oriented attitude: 'Reduce What You Can, Offset What You Can't™'. The pronoun 'you', appearing with an image of an individual, invests the subject (in this case, the consumer) as the carrier of responsibility for global climate management. Property rights are reinforced by the trademark, and attention is directed away from the causal agents of GHG emissions. Such devices indicate an individualistic style of ideology, one that entreats the reader to own the message.

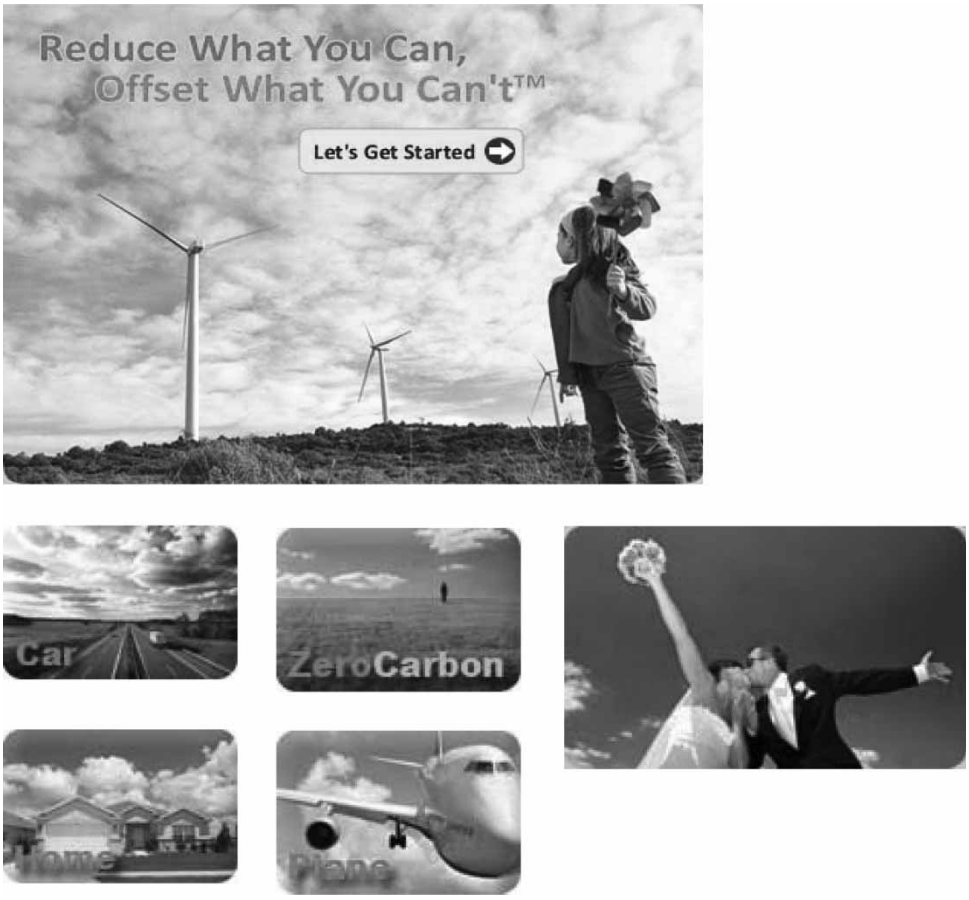

FIGURE 2 The Carbon Fund

Sources: www.carbonfund.org/site/pages/individuals/individual_business_carbon_offsets, www.carbonfund.org/calculators, www.carbonfund.org/site/pages/our_projects/category/verification and www.carbonfund.org/site/pages/land/enter_a_donation_amount.

A sustainability element is introduced by the image of the standing child looking back at wind turbines (looking back at the future as she advances in the present). Her age and possible ethnicity represent a message of sustainability. The grammatical mood is repeated in the other images. A quotation appears with the set of four smaller images:

> Carbonfund.org is leading the fight against global warming, making it easy and affordable for any individual, business or organization to eliminate their carbon footprint and hastening the transformation to a clean energy future.

The third-person, passive voice of the quotation above removes responsibility for climate management from organizations and individuals producing GHG emissions, at the same time as inviting individuals to become, as it were, agents of their own destinies. The viewer is encouraged to form an impression that consumption of emissions offsets will produce a future uncluttered by uncertainties, that sacrifices are not needed, that global security can be purchased, owned and trademarked, and that personal plans can be achieved, uninterrupted by global crises.

The use of text is designed for maximum impact. The appearance of single-word paragraphs in the images ('Car', 'Plane', 'Home', 'ZeroCarbon') conflate the connotations of a hoped-for zero-carbon reality with material consumption. The image of the joyful, besuited, marrying couple, similarly, speaks to the domains of consumption and material security as made available through carbon mitigation.

Figure 2 can be considered to be strongly oriented towards its reader. When considering the use of single words with rhetorical features such as use of colour, angles of the subjects of the images, perspective and overall mood, it is here inferred that the authors have an objective to persuade business managers as to the merits of market-based GHG emissions management. This is an example of discursive interference. The indirect discourse of material, individualistic consumption is borrowed and placed in a visual, direct discourse of economic sustainability.

Figure 2 thus draws on a managerialist discourse merging four discourses: a sustainability discourse, a progress through financial instruments discourse, a totemic sustainability discourse and a consumerism discourse.

4.2.3. The World Wide Fund

The WWF document examined is *Climate Change & the Financial Sector: An Agenda for Action*, issued in 2005 (WWF, 2005). The Foreword of the document was selected for in-depth examination. The first passage of the Forward comprises three paragraphs, as follows.

> Climate change poses a major risk to the global economy: It affects the wealth of societies, the availability of resources, the price of energy and the value of companies.
>
> At the same time, the need to revolutionize the way we use energy opens up a new universe of options for economic development and social benefits.
>
> The financial industry has a two-fold responsibility. On the one hand, it needs to prepare itself for the negative effects that climate change may have on its business and on its customers. On the other hand, it can significantly help mitigate the economic risks and enter the low-carbon economy by providing appropriate products and services. (original formatting)

The extract above makes recognition of climate change conditional on wealth creation. The three, almost consecutive, idiomatic clause anophora ('At the same time, the need', 'On the one hand, it

needs' and 'On the other hand, it can') are usually used in the English language to present contrastive arguments. Here they are used to persuade readers that engaging with the costs of environmental reparation (something that in the usual turn of events an investor might avoid) now *makes sense*. This becomes a motif through the entire document. Bringing in environmental awareness to the portfolio construction process is presented as a necessary insurance measure that, at the same time, offers prospects of competitive market positioning, future revenue streams, economic opportunities and so on. Investment implications are contextualized by reminders ('the value of companies') and framed by invented compound noun phrases ('enter the low-carbon economy').

The document does not invite debate or questions. Rather, the document presents a series of financialized solutions that are framed as revenue growth opportunities for nation states, investment institutions and businesses.

The one-page foreword concludes much like a legal document (although this document is without legal force). Displayed at the bottom of the page are scanned facsimiles of the signatures of the leaders of the two organizations. Names and titles are printed under the signatures, respectively 'COO' (Chief Operating Officer) and 'CEO', indicating a merging of the non-profit sector and the for-profit sector. The place and date at which the document was signed 'London, June 2005' appears immediately above one of the signatures. The ceremonial typography (Machin, 2007) legitimizes a twinned authorship of an environmental NGO and a major financial services firm (Khorana et al., 2005),[13] which might otherwise be questioned.

The WWF/Allianz document draws on a managerialist discourse merging three discourses: a managerialist discourse, an opportunism discourse and a progress through financial instruments discourse.

5. A crossing of discourses

In this final section it is shown how discourse elements have crossed between policymakers, as represented by the UNFCCC and World Bank, and the business and managed investment sectors. Table 1 presents a summary of the analysis.

TABLE 1 Distinctive feature matrix

	UNFCCC	World Bank	Business	Managed investments
Composition	+comp	+comp	−comp	−comp
Presentation	−presr	−presr	−presr	−presr
Argumentation	−argus	−argug	−argug	−argug
Loaded vocabulary	−loco	+loco	−loco	+loco
Schemes of words	+scheme	+scheme	+scheme	n/a
Voice	−voice	−voice	+voice	+voice
Modality	+modal	+modal	+modal	+modal
Grammatical mood	−mood	+mood	+mood	+mood
Visual rhetoric	−vis	+vis	+vis	+vis

Column 1, representing the UNFCCC, exhibits most strongly a sustainability discourse and a progress through financial instruments discourse. Following a distinctive feature approach, the pattern in column 1 (+comp, −presr, −argus, −loco, +scheme, −voice, +modal, −mood, −vis), when considered with the *content* of the examined documents, indicates a discourse that can be characterized as emphatic, declarative and (yet) highly interpretive in the solutions it provides. Use of the passive tense and avoidance of unexplained jargon are devices that permit an open interpretation of climate policy.

Column 2, representing the World Bank, exhibits most strongly a managerialism discourse and a progress through financial instruments discourse. The pattern differs from the pattern in column 1 in three respects: +loco in column 2 indicates managerial jargon in the text; +mood indicates an imperative mood; and +vis indicates the use of dramatic imagery to inflect the text.

Moving to the two rightmost columns of Table 1, the patterns of features depart from the discourses of the UN and World Bank in their adoption of relaxed grammar (−comp). The readerships of Carbon Fund- and CDP-issued material are invited to both participate personally in the arguments proposed and 'own' the debate (if not the responsibility) for climate management.

Most of the remaining features also appear in the World Bank and UN columns. Predictions of climatic variations issued by the IPCC, for example, are emphasized in terms of the meaning systems of business managers, consumers and investment portfolio managers. Specific actions are legitimized via, for example, the metaphor of cost-benefit analysis. Word schemes and use of the active voice stress the benefits of climate management measures accruing to the individual (customer, client or manager). In contrast, discussion of shouldering responsibility for climate change management is usually made in the passive voice, serving to remove the agent from the proposed action, or to make the agent anonymous. In this way, the language works to frame climate management in terms of economic consumption and business growth (Bäckstrand and Lövbrand, 2007). These aspects are reinforced by the emotive use of dramatic visual imagery.

All the identified discourses – sustainability, individualism, material consumption, progress through financial instruments, opportunism and managerialism – work to deflect attention from the emitters of GHGs. The discourses of opportunism and managed risk, which originate in the managed investments domain, are associated with policymakers' promotion of emissions trading schemes. The mediation of business groups also inserts a discourse of consumerism into climate policy. While such discursive transfers may have brought climate change and its associated terminology into household parlance, attachment of consumerism and 'business as normal' to climate policies would seem to jar with objectives to reduce the scale, volume and harmful effects of industrial carbon emissions. By unspoken fiat, the market is in climate policy the new truth that cannot be contradicted.

Notes

1. The UK-based Institutional Investors Group on Climate Change is constituted by a number of British occupational pension funds. P8, formed in 2008, is constituted by a number of British and North American public sector occupational pension funds. P8 has claimed an objective to address climate change at organizational, policy and market levels. ClimateWise, formed in 2007 and constituted by a number of British insurers, has required its members to disclose publicly how they have addressed risks posed by global climate behaviours. The Climate Institute is funded by an Australian charitable institution. Membership is drawn from commercial interests in health research, climatology and energy generation. An organization carrying the same name, composed of US and UK government-sponsored climate scientists and policymakers, has urged for public disclosure of investment risks related to climate events. The CDP claimed in 2009 to have secured the agreement of the US National Association of Insurance Commissioners to require member organizations to undertake to disclose to regulators policies adopted with respect to identified 'exposures' to climate change. For example, Other relevant lobby groups and collectivities include the World Resources Institute, CERES and The Climate Registry.

2. The meetings included a Network for Sustainable Financial Markets conference on climate change risk in the North American pensions market; a master class on sustainable investing hosted by Double Dividend, Amsterdam; a panel of the Joint Actions on Climate Change Conference, Aalborg, comprising the International Finance Corporation of the World Bank, the United Nations Principles for Responsible Investment organization and the Danish Government's Centre for Corporate Social Responsibility; the Global Dialogue Conference on Climate Change As Challenge for Intercultural Inquiry on Values, Aarhus; the Global Conference on Environmental Taxation Issues, Lisbon; and the Art and Climate Change event hosted by Kaaitheater and the European Economic and Social Committee, Brussels.
3. Such framing appears throughout the document, in which 370 instances of the word 'carbon' appear. Compound nouns formed with the word are identified after excluding its appearance on its own (9 times), and 'carbon emissions' (7 times), and variants of 'carbon dioxide equivalent' (70 times). A total of 284 instances of the word 'carbon' remain. Variants of 'carbon finance' and 'carbon markets' account for 137 of those mentions. The remainder, 174, use 55 different compound nouns, 43 of which are linked with economic growth and markets (78.1%), for example, 'lower-carbon growth' and 'carbon market forces'. A total of 57 different non-technical compound nouns are used containing the word 'carbon', such as 'carbon finance' and 'carbon markets'. These exclude 'carbon emissions', which has a technical definition. The 23 mentions of humanitarian concerns accompany those 57 compound nouns thematically (40.3%), for example, 'carbon with a human face' and 'While promoting biodiversity, conservation and poverty reduction', appended to discussion of a carbon fund. Of the 41 instances of the words 'poverty', 'poor', 'poorer' and 'poorest', 23 are associated with non-technical compound nouns containing the words such as 'using carbon revenues for a poor community' and 'carbon revenue will be earmarked for poverty alleviation'.
4. Attribution of this image to the effects of climate change is certainly intended but is conjectural. On inquiry, the World Bank photo library in Washington, DC, could not identify the source and author of the image.
5. An irony in the arguments proffered here is that policy as formulated by the Intergovernmental Panel on Climate Change advocates coordinated management measures.
6. Outputs of the modelling constructed by Dr C. Hope appear in IPCC (2007) and form the basis of UNFCCC and UK governmental policy. See also SCEA (2005a, 2005b).
7. Available at www.cdproject.net/en-us/results/pages/leadership-index.aspx.
8. In 2002, the Carbon Disclosure Project hired the consultancy Innovest Strategic Value Advisors, Inc. (as of 2009, owned by RiskMetrics Group, Inc., ticker: NYSE, RMG; part of the J. P. Morgan group, ticker: NYSE, JPM) for this purpose.
9. The contributions of Dr Matthew Shapiro of the Illinois Institute of Technology to the findings presented in this section are acknowledged.
10. The Greenhouse Gas Protocol Standard (WRI, 2005), a document issued by the World Resources Institute, has been used widely by companies in the energy sector to report their greenhouse gases emissions. Carbon dioxide is one of the six IPCC-designated GHGs. Emissions of non-CO_2 GHGs are converted to metric tons CO_2 equivalent using the one-hundred-year Global Warming Potential values as promulgated by the IPCC. The calculation yields a CO_2 common unit of emissions quantification.
11. The rationale for the exclusion of Scope 2 emissions cannot reasonably be that it is only Scope 1 emissions that are regulated in some jurisdictions: the UK Emissions Trading Scheme, for example, has required participants to account for GHG emissions from the generation of purchased electricity.
12. A referent is a real, material or extra-linguistic object designated by a sign (Van Dijk, 2006).
13. The Allianz Global Investors Group was quoted with (approximately) US$1.1 trillion under direct management as of June 2005, the date on which the WWF/Allianz document examined was signed. Sources: IMA (2005) and IMF (2005).

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Appendix: a historical note on GHG ETSs

At the time of writing, the experiences of some European states that introduced a carbon tax before the Kyoto Protocol (pre-1998), for example, Denmark and Finland, had not convinced the European Commission to introduce an EU-wide carbon tax. The Commission has shown itself more receptive to pressure coming from the UK and other countries for the introduction of regional emissions trading schemes (ETSs) (EC, 1998). Evidently, one source of pressure for the present EU ETS is the UK (House of Commons Committee of Public Accounts, 2004, Evidence Q12). To explain, Britain's ETS was developed by British Petroleum plc (NYSE ticker: BP). BP's launch of an internal GHG ETS in 1999 was followed in the next year by the creation of an Emissions Trading Group secretariat at the UK Department for the Environment, Food and Rural Affairs, which was made responsible for developing the UK scheme. (After the British GHG ETS was launched in 2002, one of the first recipients was BP, which received a payment of GB£18.9 million from the UK government in return for joining the scheme; NAO, 2004.)

The development strategy of the UK ETS was to establish a market that would gain itself credibility in the City of London (House of Commons, 2004, testimony from Sir Brian Bender and Henry Derwent). Scheme participants that reduced their GHG emissions below a government-set initial threshold level of allowances, could sell their 'unspent' allowances at the market price (House of Commons, 2004, Figure 1, p.3).

The price crash of trading credits in the UK scheme, soon after its launch, did not deter the European Commission (NAO, 2004, Key Finding No. 2), which consulted BP and other architects of the UK

scheme (such as the European Petroleum Industry Association), before launching its own scheme in January 2005 (www.europia.com/content/default.asp?pageid=416).

These events, according to the UK National Audit Office, ensured that manipulated trading was a common feature of the UK and European schemes (NAO, 2004, Sections 2.5 and 2.7). Generous emissions allowances subsequently granted under National Allocation Plans have promoted both consumption and production above mitigation and the reduction of GHG emissions levels (e.g. DEFRA, 2007).

Details of the European ETS scheme can be found at http://ec.europa.eu/environment/climat/pdf/emission_trading2_en.pdf.