

|  |
|--|
| <b>Institution:</b> University of Oxford   |
| <b>Unit of Assessment:</b> 32  |
| <b>Title of case study:</b> Introducing an Ethical Perspective into Deliberation About Climate Change  |
| <p><b>1. Summary of the impact</b> (indicative maximum 100 words)</p> <p>Professor John Broome's research on the ethics of climate change and on our associated responsibility to future generations has had a significant impact on those involved in policy decisions concerning climate change. Most notably, Professor Broome is serving as Lead Author for Working Group III of the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (the IPCC), which is a unit of the United Nations and the leading international body for the assessment of climate change: its work is directed by, and approved by, governments. He is also a member of the IPCC's Synthesis Report. In addition, he has raised public awareness of the ethical issues with which he has grappled through a series of publications and lectures.</p>  |
| <p><b>2. Underpinning research</b> (indicative maximum 500 words)</p> <p>Ever since the early 1990s, Professor John Broome has been pursuing philosophical issues that arise in connection with climate change.</p> <p>In a 1994 article entitled 'Discounting the Future', he raises various ethical questions of fundamental importance about our responsibility to future generations. Since 2000, he has used a series of publications to explore these questions in greater depth and to consider some of their practical repercussions. In 2004, he published his seminal book <i>Weighing Lives</i>. In this book, he reminds us how, both as individuals and as societies, we are faced with choices that involve the weighing of people's lives, sometimes against one another, sometimes against other goods. Climate change introduces just such choices. This makes the question of how we should weigh lives unavoidable. Professor Broome draws on precise methods from economics in an attempt to develop a theoretical basis for answering this question. In the course of doing so, he engages with the intuition that changing the size of the world's population is, in itself, neither good nor bad, and argues that this intuition is unsustainable in any coherent theory of value. He further develops this argument in his 2005 article 'Should We Value Population?', and points out the serious problem that it poses for evaluating policies in response to global warming – the point being that these policies are bound to have an effect on the size of the world's overall diachronic population.</p> <p>At around the same time as he wrote this article, Professor Broome also wrote an article entitled 'Valuing Policies in Response to Climate Change', which helped to inform the Stern Review of the Economics of Climate Change. In this article, Professor Broome confronts the question of whether the well-being of future people can properly be discounted in our current deliberations and urges that there are no convincing grounds for thinking so.</p> <p>In a <i>Scientific American</i> article in 2008, he introduces a significant further twist to these considerations. Having argued that future generations will suffer most from the harmful effects of global climate change, he goes on to point out that, if the world economy grows, they will be richer than we now are. This further complicates the choices that we currently face. For it means that we must enlist the help of expert economists to decide whether to use aggressive means to reduce the chances of future harm or to let our possibly much richer future descendants fend for themselves. The economists in turn will have to make ethical decisions in formulating their advice. Even the tiny chance that utter catastrophe will ensue from global warming means that they will have to decide how to factor in that possibility, and this is, on Professor Broome's account, a largely ethical decision, which returns us to some of the difficult questions raised earlier about the value of people's existing at all.</p> <p>In 'The Most Important Thing About Climate Change', which appeared in 2010, Professor Broome points out that we now have the wherewithal to solve the problem of climate change without making any sacrifice. For we can both reduce our profligate emission of greenhouse gases and compensate ourselves in various ways for doing so. It would nevertheless be far better, he argues, for us to do what the Stern Review advocated, namely reduce our emissions <i>without</i> compensation, by sacrificially redistributing wealth from present people to future people. In the light</p> |

## Impact case study (REF3b)

of this, Professor Broome proposes various courses of action – reminding us that there is a degree of urgency here which means we must act before fully and satisfactorily addressing all of the ethical issues involved.

Professor Broome has been the White's Professor of Moral Philosophy in the University of Oxford since 2000. He also has a research assistant, Dr Yair Levy, who is employed on grants from the British Academy and John Fell Fund, and who carries out his own background research on the ethics and economics of climate change on which Professor Broome has been able to draw.

### 3. References to the research (indicative maximum of six references)

John Broome, *Weighing Lives* (Oxford: Oxford University Press, 2004).  
DOI:10.1093/019924376X.001.0001

John Broome, 'Should We Value Population?', in *The Journal of Political Philosophy* **13** (2005), 399-413. DOI: 10.1111/j.1467-9760.2005.00230.x

John Broome, 'Valuing Policies in Response to Climate Change: Some Ethical Issues' Archived treasury.gov.uk page:  
[http://webarchive.nationalarchives.gov.uk/20130129110402/http://www.hm-treasury.gov.uk/d/stern\\_review\\_supporting\\_technical\\_material\\_john\\_broome\\_261006.pdf](http://webarchive.nationalarchives.gov.uk/20130129110402/http://www.hm-treasury.gov.uk/d/stern_review_supporting_technical_material_john_broome_261006.pdf)

John Broome, 'The Ethics of Climate Change', in Tim Folger and Elizabeth Kolbert (eds), *The Best American Science and Nature Writing 2008* (Houghton Mifflin, 2009). This article originally appeared in *Scientific American* **298** (2008), 69-73.  
<http://users.ox.ac.uk/~sfop0060/pdf/The%20ethics%20of%20climate%20change.pdf>

John Broome, 'The Most Important Thing About Climate Change', in Jonathan Boston, Andrew Bradstock, and David Eng (eds), *Public Policy: Why Ethics Matters* (ANU E Press, 2010).  
<http://epress.anu.edu.au/apps/bookworm/view/Public+Policy%3A+Why+ethics+matters/5251/ch06.xhtml#toc-anchor>

The quality of this research is evidenced in all but one case by the place of publication: the peer-reviewed journals and publishing houses concerned do not publish work that is not of internationally recognised quality. The exception is the article on the Treasury's website, whose quality is evidenced by its influence on the Stern review, in which there are several references to Professor Broome's work and to his helpful contributions to the report (see Ch. 2, p. 28, n. 5; Ch. 2, p. 31, n. 9; and Ch. 2, p. 48). The report of the review is available at  
[http://webarchive.nationalarchives.gov.uk/+http://www.hm-treasury.gov.uk/independent\\_reviews/stern\\_review\\_economics\\_climate\\_change/stern\\_review\\_report.cfm](http://webarchive.nationalarchives.gov.uk/+http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm).

### 4. Details of the impact (indicative maximum 750 words)

Professor Broome's work has attracted a good deal of attention among individuals and organisations already concerned with climate change, as well as bringing others to a fresh concern with it. His work has also been used to shape policy.

#### (i) Work for the Intergovernmental Panel on Climate Change

Most notably, Professor Broome was invited to serve as Lead Author for Working Group III of the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, the leading international body for the assessment of climate change. This invitation came in 2010 from Ottmar Edenhofer, the Chairman of Working Group III, who was familiar with some of Professor Broome's work on climate change. (Professor Broome was told informally that the subsequent invitation to become a member of the IPCC's Synthesis Report, where he serves as the only philosopher – an invitation that likewise came from Ottmar Edenhofer – was driven by a conviction that the scientific issues of climate change are now less pressing than the ethical issues.) The report is intended for policy-makers, and it will include the application of theory taken from Professor Broome's book

## Impact case study (REF3b)

*Weighing Lives*. Professor Broome's first involvement with this report was to take part in a preliminary meeting of authors for Working Groups II and III, where he was on the scientific steering committee and chaired two sessions: this meeting was designed 'to support ongoing AR5 [Fifth Assessment Report] efforts and promote coordination across AR5 author teams..., [by summarising] the body of knowledge and [highlighting] key issues related to this important set of topics [i.e. topics concerning climate change].'<sup>[i]</sup> An early draft of the report appeared in the late spring of 2013 and received extensive comments from government officials. Professor Broome's research assistant Dr Levy, who provides commentary on material drafted by Professor Broome for the IPCC, has himself now been invited to act as an expert reviewer of other IPCC reports.

### (ii) Raising Awareness of the Issues

In 2012, Professor Broome spoke at a public policy conference in Austria, organised by Joanneum Research, a research institute involved in public policy research owned by the Austrian state of Styria. This was attended both by members of the public and by public policy makers. Professor Broome has also given many lectures beyond academia about climate change. One of these was to the Swedish Royal Academy of Sciences in 2008 (and was attended by the King and Crown Princess). In 2009, he gave a talk on Ethics and Public Policy, by video link, to a large conference in Wellington that consisted mostly of public policy makers, but also included a large number of civil servants. He also gave a talk to the University of Toronto, after which finance columnist Ellen Roseman wrote in *The Star*, a Canadian newspaper, 'My head was exploding after Professor Broome's lecture. And I realized why I was attracted to philosophy – because of the fundamental questions it tries to address and the reasoned debate it encourages.'<sup>[ii]</sup> He gave a Tanner Lecture on the topic, open to members of the public, at the University of Michigan in 2012. Later in 2012 Professor Broome gave talks at the UK Treasury and the World Bank. For the former he used feedback forms, and Fayyaz Muneer, organiser of the talk, commented, 'I now know to distinguish between good solutions and just solutions... I will also think more carefully about what we owe to future generations... I'll be arguing with people differently now.'<sup>[1]</sup> Other comments, all from employees of the Treasury, included the following: 'The talk offered a new method of dealing with climate change... [This] will influence my future work and economic thinking.' 'To my surprise the conclusion it drew is simple, justifiable in principle, and provides a very interesting new perspective on the political economy of tackling climate change... [It's] affected my thinking on issues relevant to my job...' 'It changed my perception of plausible and desirable responses to climate change.' Several other respondents referred to the new perspective that Professor Broome had provided. Towards the end of 2012, he gave a talk in Oslo organised by the Oxford University Norway Society and attended by the UK Ambassador to Norway, Jane Owen. In a subsequent e-mail to him, she wrote, 'Your presentation on climate change and the drivers related to beneficence and justice was extremely thought-provoking.' She went on to applaud what she described as 'the positive impact [of your international work] on experts arguing to push climate back up the political and intellectual agenda.'<sup>[2]</sup>

### (iii) Discussions on Blogs and Elsewhere

Professor Broome's work has been much discussed on blogs. His *Scientific American* article and his work for the Stern Review are both cited in a report on the website of 'Economics for Equity and the Environment Network' ('E3 Network'), a national network which aims to assist democratic and participatory decision-making in public policies to protect people and the environment.<sup>[iii]</sup> A post from the American organisation 'Climate Science Watch', a non-profit public interest education and advocacy project, mentions and commends Professor Broome's *Scientific American* article.<sup>[iv]</sup> There are posts on the same article in blogs entitled 'Unchartered Territory'<sup>[v]</sup>, 'Real Climate'<sup>[vi]</sup>, 'Energy Bulletin'<sup>[vii]</sup> (published by the think tank 'Post Carbon Institute'), and 'The Uncertainty Principle'<sup>[viii]</sup>. There are summaries of Professor Broome's ideas on the websites for both the National Center for Policy Analysis<sup>[ix]</sup>, a non-profit non-partisan public policy research organisation, and Leonardo Energy: Global Community for Sustainable Energy Professionals<sup>[x]</sup>. Three documents from the 'Global Commons Institute', an independent organisation campaigning on climate change, cite Professor Broome's work.<sup>[xi]</sup>

### (iv) The Stern Review

Finally, the Stern review, on which Professor Broome's work has had an influence (see §2 above),

## Impact case study (REF3b)

has itself been very influential. It is cited in several national government policy statements. For instance, the UK Treasury wrote in its 2008 'action plan' on sustainable development that 'the Treasury will continue to propagate the findings of the Stern review internationally and to use it as a basis for domestic actions to reduce greenhouse gas emissions'<sup>[xii]</sup>, and in its 2010 report 'Climate Plan', it adopts the review's main aims<sup>[xiii]</sup>. The Australian government, in its 2011 'Climate Change Plan', advocates taking action to combat climate change with an extensive quotation from the Stern review that concludes: 'Tackling climate change is the pro-growth strategy for the longer term, and it can be done in a way that does not cap the aspirations for growth of rich or poor countries. The earlier effective action is taken, the less costly it will be.'<sup>[xiv]</sup> Finally, the Swedish government's 2009 'Overview of Swedish Climate and Energy Policy'<sup>[xv]</sup>, the German Federal Environment Agency's 2009 'Concept for a Future Climate Policy'<sup>[xvi]</sup>, the French government's 2011 'Plan of Adaptation to Climate Change'<sup>[xvii]</sup>, and a 2009 EU Commission White Paper<sup>[xviii]</sup> all make frequent references to the review and cite its estimates of how much costlier inaction will be than action.

### 5. Sources to corroborate the impact (indicative maximum of 10 references)

#### *Testimony*

- [1] Feedback statement from a Policy Advisor, HM Treasury
- [2] Email from UK Ambassador to Norway

#### *Other evidence sources*

- [i] A report of the meeting of authors for Working Groups II and III of the Fifth Assessment Report of the IPCC is published by the IPCC: the quotation given is from p. 1.
- [ii] <http://www.thestar.com/business/article/717129--author-frames-climate-change-as-ethical-dilemma>
- [iii] [http://www.e3network.org/papers/Ethics\\_and\\_the\\_Economist\\_033111.pdf](http://www.e3network.org/papers/Ethics_and_the_Economist_033111.pdf)
- [iv] <http://www.climate-science-watch.org/2009/08/31/pay-now-or-pay-more-later-global-climate-adaptation-price-tag-climbs-says-new-report/>
- [v] <http://unchartedterritory.wordpress.com/2008/05/21/sternly-bemused/>
- [vi] <http://www.realclimate.org/index.php/archives/2008/05/freeman-dysons-selective-vision/>
- [vii] <http://www.energybulletin.net/node/49522>
- [viii] <http://armbrechtd.blogspot.co.uk/2012/04/global-warming-global-catastrophe.html>
- [ix] [http://www.ncpa.org/sub/dpd/index.php?Article\\_ID=16670](http://www.ncpa.org/sub/dpd/index.php?Article_ID=16670)
- [x] <http://www.leonardo-energy.org/welcome-leonardo-energy>; <http://www.leonardo-energy.org/climate-change-pay-now-or-ask-credit>
- [xi] [http://www.gci.org.uk/Documents/Ott\\_Domains\\_Climate\\_Ethics\\_.pdf](http://www.gci.org.uk/Documents/Ott_Domains_Climate_Ethics_.pdf);  
<http://www.gci.org.uk/Documents/Anderson.pdf>;  
[http://www.gci.org.uk/Documents/UBA\\_Interpreting\\_Art2.engl\\_.pdf](http://www.gci.org.uk/Documents/UBA_Interpreting_Art2.engl_.pdf)
- [xii] [http://www.hm-treasury.gov.uk/d/sustainabledevelopment\\_actionplan181108.pdf](http://www.hm-treasury.gov.uk/d/sustainabledevelopment_actionplan181108.pdf)
- [xiii] <http://www.hm-treasury.gov.uk/d/hmtreasuryclimatechangeplan2010.pdf>
- [xiv] <http://www.kpmg.com/au/en/issuesandinsights/articlespublications/pages/carbon-price-mechanism.aspx>
- [xv] <http://www.government.se/sb/d/574/a/129935>
- [xvi] <http://www.umweltdaten.de/publikationen/fpdf-k/k3881.pdf>
- [xvii] <http://www.developpement-durable.gouv.fr/The-national-climate-change.html>
- [xviii] <http://eur-ex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2009:0147:FIN:EN:PDF>