HPSC2014 Science and Global Citizenship

Course Syllabus

2011-12 session | Dr Simon Lock| simon.lock@ucl.ac.uk

Course Information

Global climate change is the defining issue of our age. The internet and online social networking tools are challenging our ideas of privacy, communication, and democratic involvement. Scientific knowledge and technological systems both shape and are shaped by global aspirations, knowledges, capabilities, organizations and markets. Yet their political effects and achievements can also be resolutely local. Policies that affect all communities in the world are made, and challenged, on the basis of scientific and technical knowledge. If we are all members of a global community then who should have a strong voice in decisions that affect that community, and how should these and other voices be heard? Does the internet create a global and more democratic society or are we all under increasing surveillance. What are our rights and obligations as global citizens? Scientists can speak authoritatively on important global phenomena, but how should and how does scientific advice on global issues relate to broader political processes? This module explores such questions, with special reference to global climate change and the internet.

Basic course information

Moodle Web site:	search HPSC2014
Assessment:	One short essay (30%), one long essay (40%), advocacy project (30%)
Timetable:	www.ucl.ac.uk/sts/hpsc
Prerequisites:	No prerequisites. Course is designed for second and third year undergraduates
Required texts:	no required texts
Course tutor:	Dr Simon Lock
Contact:	simon.lock@ucl.ac.uk | t: 020 7679 3763
Web:	www.ucl.ac.uk/sts/staff/lock
Office location:	22 Gordon Square, Room 1.2
Office hours:	Tuesdays 11am – 1pm

Schedule

UCL Week	Topic	Date	Activity
20	Introduction and what is citizenship	9th Jan	
21	The politics and social shaping of technology	16th Jan	Read Winner paper before class
22	The history and global politics of the internet	23rd Jan	Read Lanchester article and bring in newspaper articles
23	Web 2.0 and online social media	30th Jan	Read Morozov article and bring in newspaper articles
24	Technological citizens, users and hackers	6th Feb	
25	**Reading Week – no class**		
26	History of climate change	20th Feb	Short Essay due 21st February
27	Comparable global debates	27th Feb	
28	Problems and Solutions: Mitigation vs Adaptation	5th Mar	
29	Problems and Solutions: The Techno-fix	12th Mar	Read Sarewitz and Nelson article before class
30	Scientific citizens, skepticism and public engagement	19th Mar	Long Essay due 23rd March
31	End of Term		Advocacy project due 26th March

Assessments

Summary

	Description	Deadline	Word limit
Short Essay	See essay title below	11.59 pm Tues 21-Feb	2000
Long Essay	See essay title below	11.59pm Fri 23-Mar	3000
Advocacy Project	Details will be provided in class	11.59pm Mon 26-Mar	1000

Assignments

Essays must be submitted via Moodle

In order to be deemed 'complete' on this module students must attempt all assessments.

Short Essay Title: Does the development of web 2.0 enhance or constrain our capacity to act as global citizens?

Long Essay title: Is geo-engineering a necessary emergency policy, or a dangerous consequence of a technocratic approach to managing climate change?

Criteria for assessment
The departmental marking guidelines for individual items of assessment can be found in the STS Student Handbook.

Aims & objectives

The aim of the module is to provide students with the knowledge and skills necessary to explore the opportunities for, and responsibilities of, citizens with respect to science based decision-making processes of global significance and to guide students in an exploration of the issues surrounding technological systems on a global scale. Specific reference will be made to climate change and the internet.

By the end of this course you should possess:
• knowledge and understanding of the political processes shaping scientific and technological systems of global significance
• knowledge and understanding of the extent and constraints of citizens within such political processes
• knowledge and understanding of the rights and obligations of citizens with respect to global scientific and technological systems
• Skills, drawing from core STS literature, necessary to interpret science-based decision making in social and political contexts
• Citizen skills in written and spoken communication
• Citizen skills in relating personal experience to the ideas, tools and values of academic research
• Citizen skills in the recognition, collection and analysis of research materials
• Citizen skills in argumentation, listening and constructive dialogue
• Skills in advocacy and public communication

Reading list

The notes that you take in lectures will not be detailed enough to understand a top ic or to write an essay on that topic. It is therefore essential that you make use of the reading lists. In essays you are expected read widely and to use (and make reference to) material in addition to that labelled essential reading. You may use material that is not on the reading list but use all readings critically - you don't necessarily have to agree with everything you read.

The reading list is separated into three different types of readings. The first part of the list gives details of some general readings both academic and popular which cover different aspects of the course.

The rest of the list breaks down the readings under each week's lecture topic. Under each week's topic there will be both Seminar Readings, which should be read BEFORE the class, and Background readings any of which are there to help when you come to write your coursework.

General Background Reading

The following are good reference works:

Part One: Technology and the Internet

Turkle, S (2011) *Alone Together*. (Persueus: New York)

David E. Nye, *Technology Matters: Questions to Live with,* Cambridge MA: MIT Press, 2006 (HISTORY OF SCIENCE W 10 NYE and SLC)

Aihwa Ong and Stephen J. Collier (eds.) *Global Assemblages: Technology, Politics, and Ethics as Anthropological Problems,* Oxford: Blackwell, 2005. (ANTHROPOLOGY D 14 ONG)

Part Two: Climate Change

Andrew E. Dessler and Edward A. Parson, *The Science and Politics of Global Climate Change: a Guide to the Debate*, Cambridge: Cambridge University Press, 2006. (Science Library: GEOGRAPHY E 61 DES)

Anthony Giddens, *The Politics of Climate Change*, Cambridge: Polity Press, 2009.

Robert Henson, *The Rough Guide to Climate Change*, London: Rough Guides, 2006 (Science Library: GEOGRAPHY E 61 HEN)

Steve Rayner and Elizabeth L. Malone (eds.), *Human Choice and Climate Change*, Columbus: Battelle, 1998. (Science Library: GEOGRAPHY E 61 RAY)
Volume 1: The societal framework; Volume 2: Resources and technology;
Volume 3: The tools for policy analysis; Volume 4: What have we learned?

Nicholas Stern, *The Economics of Climate Change: the Stern Review*, Cambridge: Cambridge University Press, 2007. (Science Library: GEOGRAPHY H 72 STE; other copies elsewhere; also online via library catalogue)

Nicholas Stern, *The Global Deal: Climate Change and the Creation of a New Era of Progress and Prosperity*, New York: Public Affairs, 2009.

William James Burroughs, *Climate Change: a Multidisciplinary Approach*, Cambridge: Cambridge University Press, 2007. (GEOGRAPHY E 68 BUR)

The following are good popular books:

David Kirkpatrick (2010) *The Facebook Effect,* (Random House) (Science Library ANTH E 50 KIR)

Morozov, E (2011) *The Net Delusion* (Allen Lane: London) (Science Library ANTH D 89 MOR)

Elizabeth Kolbert, *Field Notes from a Catastrophe: a Frontline Report on Climate Change*, London: Bloomsbury, 2007

Fred Pearce, *The Last Generation: How Nature Will Take Her Revenge for Climate Change*, London: Transworld, 2007 and *With Speed and Violence: Why Scientists Fear Tipping Points in Climate Change*, Boston: Beacon Press, 2007 (GEOGRAPHY E 61 PEA)

Mark Lynas, *Six Degrees: Our Future on a Hotter Planet*. London: Harper Perennial, 2007 (Science Library: GEOGRAPHY E 61 LYN)

Tim Flannery, *The Weather Makers: Our Changing Climate and What It Means for Life on Earth*, London: Penguin, 2005.

Week One: Introduction, Globalisation and Citizenship

Background Reading:

Melissa Leach and Ian Scoones, 'Science and citizenship in a global context' in Melissa Leach, Ian Scoones and Brian Wynne (eds.), Science and Citizens: Globalization and the Challenge of Engagement, London: Zed Books, 2005, pp.15-38.

Distinguishes between liberal, communitarian, and civic republican perspectives. This is an edited collection of fairly advanced scholarly papers on citizenship, mostly from an STS perspective.

Gerard Delanty, Citizenship in a Global Age: Society, Culture, Politics, Buckingham: Open University Press, 2000

Good survey of citizenship

Nigel Dower, An Introduction to Global Citizenship, Edinburgh: Edinburgh University Press, 2003

Tony Schirato and Jen Webb, 2003, Understanding Globalisation (London: Sage) chap 1

Manfred B. Steger, 2003, Globalization: A Very Short Introduction (Oxford University Press) Chapts 1 and 2

Michael Byers' lecture at the University of British Columbia: 'Are you a global citizen?', http://thetyee.ca/Views/2005/10/05/globalcitizen/

'Globalization' from the Stanford Encyclopaedia of Philosophy, http://plato.stanford.edu/entries/globalization

Charles S. Maier, 2000, Consigning the twentieth century to history: alternative narratives for the modern era. The American Historical Review, 105(3), 807-831

David Harvey, 1992, The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change (Oxford: Wiley-Blackwell), chaps 3 and 17

David Held and Anthony McGrew, 2007 and earlier editions, Globalization/Anti-Globalization: Beyond the Great Divide (London: Polity), chap 1

Paul Hopper, 2006, Living with Globalization (Oxford: Berg), Chap 1 and conclusion

Richard Langhorne, 2001, The Coming of Globalization: Its Evolution and Contemporary Consequences (London: Palgrave), chap 1

Week Two: The politics and social shaping of technology

Seminar reading (to be read before the class)

Langdon Winner, 'Do artifacts have politics?', in *The Whale and the Reactor: a Search for Limits in an Age of High Technology*, Chicago, University of Chicago Press, pp.19-39 (HISTORY OF SCIENCE W 10 WIN and SLC)

Background reading

Bernward Joerges, 'Do politics have artefacts?', Social Studies of Science (1999) 29, pp.. and Steve Woolgar and Geoff Cooper, 'Do artefacts have ambivalence?', Social Studies of Science (1999) 29, pp.433-449

Trevor J. Pinch and Wiebe E. Bijker, 'The social construction of facts and artifacts: Or how the sociology of science and the sociology of technology might benefit each other', in Bijker, Pinch and Hughes (eds.), *The Social Construction of Technological Systems*, Cambridge, MA: MIT Press, 1987, pp.17-50. (ANTHROPOLOGY E50 BIJ)

David E. Nye, Technology Matters: Questions to Live with, Cambridge MA: MIT Press, 2006 (HISTORY OF SCIENCE W 10 NYE and SLC), 'Chapter 5: Cultural uniformity or diversity?', pp. 67-86

Daniel Lee Kleinman (ed.) Science, Technology, and Democracy, Albany: State University of New York Press, 2000. (HISTORY OF SCIENCE Y 202 KLE)

Langdon Winner, 'Upon opening the black box and finding it empty: social constructivism and the philosophy of technology', *Science, Technology and Human Values* (1993) 18, pp.365-376
Critique of SCOT as apolitical

Steve Woolgar, 'The turn to technology in social studies of science', *Science, Technology and Human Values* (1991) 16, pp.20-50

Trevor Pinch, 'The social construction of technology: a review', in Fox (ed.), *Technological Change: Methods and Themes in the History of Technology*, Amsterdam: Harwood Academic Publishers, 1996, pp.17-35. (HISTORY OF SCIENCE V 5 FOX)

An interested party replies to criticisms of SCOT

Wiebe E. Bijker, 'Do not despair: there is life after constructivism', *Science, Technology & Human Values* (1993) 18, pp.113-138

David Edgerton, *The Shock of the Old: Technology and Global History since 1900*, London: Profile, 2008. (SLC and HISTORY OF SCIENCE V 60 EDG)

Week Three: The history and global politics of the internet

Seminar Reading (to read/do before class)

John Lanchester article in London Review of Books 'The Global Id', Vol. 28 No. 2 · 26 January 2006 pages 3-6

Bring to class two articles (from newspapers, magazines, online news sources, etc) that report on events illustrating the global politics of the internet

Background reading:

James Slevin, *The Internet and Society*, Cambridge: Polity, 2000 (HISTORY OF SCIENCE Y 420 SLE)

Jack Goldsmith and Tim Wu, *Who Controls the Internet?: Illusions of a Borderless World*, Oxford: Oxford University Press, 2006. (HISTORY OF SCIENCE Y 420 GOL)

Evengy Morozov, 'The Internet: A room of our own?', *Dissent*, Summer 2009

Bruce Etling, Robert Faris and John Palfrey, Political Change in the Digital Age: The Fragility and Promise of Online Organizing , SAIS Review, Summer-Fall 2010.

Lawrence Lessig, 'The internet under siege', reprinted in Albert Teich (ed.), Technology and the Future (9th Edition), 2003, pp.258-267 (HISTORY OF SCIENCE Y 90 TEI 10th edition)

Sumit Roy, Globalisation, ICT and Developing Nations: Challenges in the Information Age, London: Sage, 2005. (GEOGRAPHY P 92 ROY)

Daniel Miller and Don Slater, The Internet: an Ethnographic Approach, Oxford: Berg, 2000. (ANTHROPOLOGY D 89 MIL)

Digital Divide

Pippa Norris, *Digital Divide: Civic Engagement, Information Poverty, and the Internet Worldwide*, Cambridge: Cambridge University Press, 2001. (PUBLIC POLICY HN 49 NOR)

Aliye Pekin Celik (ed.) *Our Common Humanity in the Information Age: Principles and Values for Development*, New York: United Nations, 2007. (GEOGRAPHY H 71 CEL)

Web Activism

Michael Dartnell, *Insurgency Online: Web Activism and Global Conflict*, Toronto: University of Toronto Press, 2006 (ANTHRO D89 DAR)

Code as Politics

Lawrence Lessig, *Code and other Laws of Cyberspace*, New York: Basic Books, 1999.

Alexander R. Galloway, *Protocol: How Control Exists after Decentralization*, Cambridge: MIT Press, 2004 (HISTORY OF SCIENCE Y 420 GAL)

IT and Cities

Saskia Sassen (ed.) *Global Networks, Linked Cities*, London: Routledge, 2002. (GEOGRAPHY H 92 SAS)

Stephen Graham and Simon Marvin, *Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition*, London: Routledge, 2001. (GEOGRAPHY H 48 GRA)

IT and India

Anna Greenspan, *India and the IT Revolution: Networks of Global Culture*, Basingstoke: Palgrave Macmillan, 2004. (Bartlett TOWN PLANNING B 171 GRE)

A. Aneesh, *Virtual Migration: the Programming of Globalization*, Durham NC: Duke University Press, 2006. (GEOGRAPHY H 88 ANE)

Biao Xiang, *Global "Body Shopping": an Indian Labor System in the Information Technology Industry*, Princeton: Princeton University Press, 2007. (GEOGRAPHY RA 88 XIA)

Week Four: Web 2.0 and online social media

Seminar reading (to read/do before class)

Morozov's Op-ed piece for the New York Times 'Surfing the Surfer', June 10, 2010, on Facebook, democracy and governance.

Bring to class two articles (from newspapers, magazines, online news sources, etc) that report on events illustrating the global politics of online social networks/media (Facebook, MySpace, Bebo, Twitter etc)

Background reading

Nicole Cohen, The Valorisation of Surveillance: Towards a Political Economy of Facebook, 2008

Is Google Making Us Stupid? Nicholas Carr, 2008, The Atlantic

A report in the Guardian about the future of Facebook and augmented reality innovation

Craig Calhoun, 'Information Technology and the International Public Sphere', in Schuler and Day (eds) *Shaping the Network Society: The Role of Civil Society in Cyberspace*, pp. 229 – 251.

Tom Hogkinson article in Guardian 'With friends like these…' *Guardian, 14 January 2008*

boyd, danah. 2007. "Social Network Sites: Public, Private, or What?" Knowledge Tree 13, May.

danah boyd and Nicole Ellison (2007, October). "Social Network Sites: Definition, History, and Scholarship." Journal of Computer-Mediated Communication, 13 (1), article 11.

danah boyd. (2010). "Social Network Sites as Networked Publics: Affordances,Dynamics, and Implications." In Networked Self: Identity, Community, and Culture on Social Network Sites (ed. Zizi Papacharissi), pp. 39-58.

West. et al. (2009) 'Students' Facebook 'friends': public and private spheres, *Journal of Youth Studies*, 12: 6, 615 - 627

Week Five: Technological citizens, users and hackers

Guest Lecture from Dr Georgina Voss.
See Moodle for online resources.

Week Six: Reading Week (no class)

Week Seven: The history of climate change

Background Reading:

Spencer R. Weart, The Discovery of Global Warming, Cambridge, MA: Harvard University Press, 2003. (Science Library: HISTORY OF SCIENCE Y 710 WEA and GEOGRAPHY E 61 WEA)

This is a good history of global warming from a history of science perspective.

The relevant chapters for this week are: 'Chapter One: How Could Climate Change?', 'Chapter Two: Discovering a Possibility', 'Chapter Three: A Delicate System' and 'Chapter Four: a Visible Threat'

James Rodger Fleming, 'Global environmental change and the history of science' in Mary Jo Nye (ed.), The Cambridge History of Science. Volume 5: The Modern Physical and Mathematical Sciences, Cambridge: Cambridge University Press, 2003, pp.634-650 (Science Library: HISTORY OF SCIENCE M 5 CAM)

Paper reviewing global climate change from a history of science perspective.
Contains more enlightenment discussion than Weart.

James Rodger Fleming, Historical Perspectives on Climate Change, Oxford: Oxford University Press, 1998. (Science Library: GEOGRAPHY E 61 FLE)

Covers the above, but at greater length and depth.

David M. Hart and David G. Victor, 'Scientific elites and the making of US Policy for climate change research, 1957-74', Social Studies of Science 23(4) (1993), pp.643-680.

Spencer R. Weart, The Discovery of Global Warming, Cambridge, MA: Harvard University Press, 2003. (Science Library: HISTORY OF SCIENCE Y 710 WEA and GEOGRAPHY E 61 WEA)

The relevant chapters for this week are: 'Chapter Five: Public Warnings', 'Chapter Six: the Erratic Beast', 'Chapter Seven: Breaking into Politics' and 'Chapter Eight: the Discovery Confirmed'

Simon Shackley and Brian Wynne 'Representing uncertainty in global climate change science and policy: boundary-ordering devices and authority', Science, Technology and Human Values 21(3) (1996), pp.275-302 (Available via electronic journals)

On scientists' treatment of uncertainty when on the boundary of science and politics.

Clark Miller, 'Hybrid management: boundary organizations, science policy, and environmental governance in the climate regime', Science, Technology and Human Values 26(4) (2001) pp.478-500.

Continues the boundary organisation analysis.
Arthur C. Petersen 'Review: models as technological artefacts', Social Studies of Science 30(5) (2000), pp.793-799.

Review of several recent STS books on modelling, including Human Choice and Climate Change by Steve Rayner and Elizabeth L. Malone.

Week Eight: Global Science: Comparable Debates

Background Reading:

David Demeritt, 'The construction of global warming and the politics of science', *Annals of the Association of American Geographers* 91(2) (2001), pp.307-337.

Argues that climate change debate has been framed as science-led and global, which has encouraged technocratic solutions, which may not be the best ones.

Paul R. Ehrlich, *The Population Bomb*, New York: Ballantine Books, 1968. (Science Library: GEOGRAPHY H 40 EHR)
This is Ehrlich's original book.

Donella H. Meadows et al, *The Limits to Growth: a Report for the Club of Rome's Project on the Predicament of Mankind*, London: Earth Island, 1972. (Science Library: GEOGRAPHY H 72 MEA)
This is the Club of Rome's original book.

Edward A. Parson, *Protecting the Ozone Layer: Science and Strategy*, Oxford: Oxford Scholarship Online, 2003. (Available online via library catalogue)
'Offers the first comprehensive history of international efforts to protect the ozone layer by abandoning the use of chlorofluorohydrocarbons (CFCs), and underlines that this is the greatest success yet achieved in managing human impacts on the global environment'

Maureen Christie, *The Ozone Layer: a Philosophy of Science Perspective*, Cambridge: Cambridge University Press, 2001. (Science Library HISTORY OF SCIENCE W 80 CHR and GEOGRAPHY E 61 CHR)
If you want some philosophy of science.

Week Nine: Problems and Solutions: Mitigation vs adaptation

Background Reading:

Nicholas Stern, The Economics of Climate Change: the Stern Review, Cambridge: Cambridge University Press, 2007. (Science Library: GEOGRAPHY H 72 STE; other copies elsewhere; also online via library catalogue)
'Part Five: Policy Responses for Adaptation'

http://www.defra.gov.uk/environment/climate/adapting/

S. Pacala and R. Socolow, 'Stabilization Wedges: Solving the Climate Problem for the Next 50 Years with Current Technologies' Science (13 August 2004) 305(5686), pp.968-972.

Andrew E. Dessler and Edward A. Parson, The Science and Politics of Global Climate Change: a Guide to the Debate, Cambridge: Cambridge University Press, 2006. (Science Library: GEOGRAPHY E 61 DES)
'Chapter 4: the climate-change policy debate: impacts and potential responses'
reviews different ways of mitigating or adapting to climate change

http://unfccc.int/kyoto_protocol/items/2830.php
The text of the Kyoto protocol can be found here.

Aaron M. McCright and Riley E. Dunlap 'Defeating Kyoto: the conservative movement's impact on U.S. climate change policy', Social Problems 50(3) (2003), pp.348-373 (Available via electronic journals)

How conservative think-tanks turned climate change into a "non-problem". Sonja Boehmer-Christiansen, 'Science, equity, and the war against carbon', Science, Technology and Human Values 28(1) (2003), pp.69-92.
Argues that the decarbonisation envisaged by the Kyoto treaty is more likely to provoke political instability than prevent climate change.

Week Ten: Problems and Solutions: The techno-fix

Seminar Reading (please read before class)

Daniel Sarewitz & Richard Nelson 'Three rules for technological fixes', Nature 456, 871-872 (18 December 2008)

Background Reading:

IPCC, Carbon Dioxide Capture and Storage, Cambridge: Cambridge University Press, 2005. (Available online at http://www.ipcc.ch/ipccreports/srccs.htm)
An IPCC Special Report. Long.

S. Pacala and R. Socolow, 'Stabilization Wedges: Solving the Climate Problem for the Next 50 Years with Current Technologies' Science (13 August 2004) 305(5686), pp.968-972.

Andrew E. Dessler and Edward A. Parson, The Science and Politics of Global Climate Change: a Guide to the Debate, Cambridge: Cambridge University Press, 2006. (Science Library: GEOGRAPHY E 61 DES)
'Chapter 4: the climate-change policy debate: impacts and potential responses'

reviews different ways of mitigating or adapting to climate change

http://www.co2storage.org.uk/
A UK consortium of researchers, including academics and the British Geological Society.

http://www.greenpeace.org/raw/content/usa/press-center/reports4/false-hope-whycarbon-capture.pdf

Greenpeace is sceptical.

Nicholas Stern, The Economics of Climate Change: the Stern Review, Cambridge: Cambridge University Press, 2007. (Science Library: GEOGRAPHY H 72 STE; other copies elsewhere; also online via library catalogue)

'Chapter 16: Accelerating Technological Innovation' discusses the economics of R&D in this area.
'Chapter 17: Beyond Carbon Markets and Technology' considers some alternative policies

James Lovelock, The Revenge of Gaia, London: Allen Lane, 2006

The original Gaia scientist. 'Chapter Five: Sources of Energy' argues that a new nuclear program is essential part of any technological fix. In summer 2008 a Camp for Climate Action event was held close to Kingsnorth Power Station near Hoo, Kent. Greenpeace activists protesting against the power station were cleared in a court-case that some see as having implications for further activism. Here's some coverage:

'Climb every chimney…', 'Beyond all reasonable doubt' and 'If I was E.On or owned an airport, I'd be very, very worried', The Guardian, 12 September 2008

On the Kingsnorth decision. Best way to access them is to go to www.guardian.co.uk and search for 'Kingsnorth'

Dale Jamieson, 'Ethics, public policy, and global warming', Science, Technology and Human Values 17(2) (1992), pp.139-153. (Available via library catalogue)

Bit old, but argues that global warming needs widespread acceptance of new moral values.

Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences, Theme Issue 'Geoscale engineering to avert dangerous climate change' compiled by Brian Launder and J. Michael T. Thompson. Online Date Friday, August 29, 2008. (Accessible from UCL computers)

Lots of geo-engineering proposals and discussion. In particular, see the Essential Examinable Reading: Stephen Schneider's introductory essay 'Geoengineering: could we or should we make it work?' at http://journals.royalsociety.org/content/lnt0676gl7302372/fulltext.html

Nature (30th April 2009) issue contains the following relevant articles:
Richard Monastersky, 'Climate crunch: A burden beyond bearing', p.1091

Nicola Jones, 'Sucking it up', p.1094
Oliver Morton, 'Great white hope', p.1097
Plus the editorial, 'Time to act', p.1077

The Guardian organised a discussion and report in July 2009 that considered a various solutions. Read:
http://www.guardian.co.uk/environment/2009/jul/13/manchester-report-climatechange

Week Eleven: Scientific citizens, skepticism and public engagement

Background reading

Scientific Citizenship

Linda J. Lear, Rachel Carson: Witness for Nature, New York: Henry Holt, 1997.
Biography of Carson.

M. Huxham, and D. Sumner, 'Emotion, science and rationality: the case of the Brent Spar', Environmental Values (1999) 8(3), pp.349-368.
Some useful analysis of the Brent Spar case.

Bert Bolin, A History of the Science and Politics of Climate Change, Cambridge: Cambridge University Press, 2007
Insider's view. Bolin was chair of the IPCC from 1988 to 1997.

Sceptics

Bjørn Lomborg, The Skeptical Environmentalist: Measuring the Real State of the World, Cambridge: Cambridge University Press, 2001 (Science Library: GEOGRAPHY H 72 LOM, plus other copies elsewhere)

Lomborg's book was published in Danish in the late 1990s and has been challenged ever since.

http://www.mylinkspage.com/lomborg.html

Essential Examinable Reading. Read Lomborg's Guardian articles (section 2 in the above website), which summarise his views in accessible form. Then read the responses from scientists in section 5. Browse the other reactions.

http://www.grist.org/advice/books/2001/12/12/short/

Lots more links to commentary on Lomborg's Skeptical Environmentalist, mostly critical.

Bjørn Lomborg, Cool It: the Skeptical Environmentalist's Guide to Global Warming, London: Marshall Cavendish, 2007. (Science Library: GEOGRAPHY E 61 LOM)

Lomborg's latest.

S. Fred Singer and Dennis T. Avery, Unstoppable Global Warming: Every 1500 Years, Lanham: Rowman & Littlefield Publishers, 2006. (Science Library: GEOGRAPHY E 61 SIN)

Fred Singer is one of the main climate change sceptic scientists.

Christopher Booker and Richard North, Scared to Death: From BSE to Global Warming – How Scares are Costing Us the Earth, London: Continuum, 2007. (Not in Library: ask JA)
'Chapter 14: Saving the Planet: Global Warming: the New Secular Religion' is an epitome of climate change rubbishing.

Ian H. Rowlands 'Beauty and the beast? BP's and Exxon's positions on global climate change', Environment and Planning C: Government and Policy 18(3) (2000), pp.339–
354 (Available via electronic journals)

Exxon is actively resisting conclusions that the climate is changing, while BP Amoco is more open to the idea. Why the difference?

Andrew E. Dessler and Edward A. Parson, The Science and Politics of Global Climate Change: a Guide to the Debate, Cambridge: Cambridge University Press, 2006. (Science Library: GEOGRAPHY E 61 DES)
'Chapter 5: The present impasse and steps forward' outlines and criticises skeptics' arguments and evidence.

Course expectations

For some weeks students will be required to have performed some research or read something BEFORE attending the class so that we can have a class discussion. Students should ensure that they have read the articles listed, or conducted a media search (where appropriate) prior to attending the class and have made notes. They should be prepared to discuss the work in the class.

Additional information

Where to find the reading material

No one text covers this course. Most of the required and optional reading material is kept in the DMS Watson science library. There is also useful material kept in **Senate House Library** which you can use with a UCL Identity Card.

You are also encouraged to use the internet for research. However make sure you reference the full web address, the site title and date visited. Be critical of what you read. Be very careful of purely descriptive sites, such as Wikipedia – we are looking for *analysis* and *argument* in your essays not just re-hashing basic information. **Also note that plagiarism, particularly involving internet sources, will be treated as a severe exam irregularity**.

Important policy information

Below are listed some important points of policy. Further details of all these policies can be found in the STS Student Handbook www.ucl.ac.uk/sts/handbook

Late submission of coursework

Penalties for late coursework submission are as follows:

- loss of 5 marks for work submitted less than 24 hours late
- loss of 15 marks for work submitted between 1 and 7 days late
- loss of all marks (i.e. work is graded 0) if submitted more than 7 days late

These rules are statutory and non-negotiable.

Coursework word limits

Penalties for over-length coursework are as follows:

- Assessed work should not be more than 10% longer than the prescribed word count. Assessed work with a stated word count above this maximum cannot be accepted for submission, but will be immediately returned to the student with instructions to reduce the word length. The work may then be resubmitted, except insofar as penalties for late submission may apply.
- If submitted work is subsequently found to have an inaccurately stated word count, and to exceed the upper word limit by at least 10% and by less than 20%, the mark will be reduced by ten percentage marks, subject to a minimum mark of a minimum pass assuming that the work merited a pass.
- For work which exceeds the upper word limit by 20% or more, a mark of zero will be recorded.
- Footnotes and endnotes **do** count as part of the word limit
- Bibliography, tables, pictures and graphs **do not** count as part of the word limit.

Extensions

If unforseeable circumstances prevent the completion of a piece of coursework, students may request an extension to the set deadline. Please consult the STS Student Handbook for further guidance on acceptable grounds for requesting an extension. Extensions must be negotiated in advance with the course tutor. Students to whom STS is parent department may also request an extension from their Personal Tutor. No extension is considered official without written approval.

The request for extension form can be found at: www.ucl.ac.uk/sts/study

Plagiarism

The *UCL Student Handbook* defines plagiarism as "the presentation of another person's

thoughts or words or artefacts or software as though they were [your] own". Students are expected to know the College and Department policies in detail and to avoid even the appearance of inappropriate behaviour. In the first demonstrated instance of plagiarism or other irregularities in this course, students normally will receive a 0 F for the course and will be referred to the department and College officials for further action. All course work is subject to scrutiny against past papers and other materials for irregularities. Electronic and other checks will be conducted; see the *STS student handbook* for additional information.

Attendance
Regular attendance is mandatory.

Requirements to complete modules
Students are required to be 'complete' in all modules. Normally all assignments must be attempted in order for students to be considered complete. This is different from 'passing' a module which requires a minimum overall module mark of 40%.

Assessment and additional examiners
Assessed materials are marked by the course tutors. These provisional marks will be distributed to students at the first opportunity. To ensure fairness, materials subsequently are scrutinised by a second examiner within the Department, and a consensus is reached on these separate assessments. All assessed materials and the consensus marks are made available for scrutiny by an examiner external to UCL. Marks are considered final only after the Board of Examiners for Science and Technology Studies has approved them in their annual meeting near the close of Term three.

Disputed marks
Students must endeavour to discuss any grievances over marks informally with the course tutor in the first instance. If informal discussion fails to resolve the matter satisfactorily and there appears to be genuine and substantive grounds for appeal, the student should submit a written explanation of their grievance to the chair of the board of examiners. A final formal written appeal can be made to the College Registrar.

Mechanisms for student feedback
Students have a variety of means for commenting on the module and module tutor. These include written module evaluations at the end of term, regular lecture assessments offered by the module tutor, and in-session opportunities. Students are welcome to bring comments and criticisms to the module tutor in the first instance, by anonymous note if necessary, then to their personal tutor or the STS undergraduate tutor. The department schedules regular meetings of the Undergraduate Student Staff Consultative Committee to which all students are invited.