THE PHILOSOPHY AND ECONOMICS OF THE ENVIRONMENT

Reading list for Trinity Term 2013

Topic One (A): Philosophical Foundations

Topic One (B) Economics Foundations: Foundations of welfare economics; Externalities and Public goods

Foundations of welfare economics (The Pareto criterion, utilitarianism, interpersonal utility comparisons, the Kaldor-Hicks compensation criterion); **Externalities and public goods**.

Questions – *answer all, briefly*

1. What, if anything, is wrong with the compensation principle? What, if anything, is wrong with the Pareto criterion?
2. What is an externality?
3. Explain how either (i) establishing property rights or (ii) using Pigouvian taxes ensures that the efficient quantity of an externality is achieved.
4. Should the victims of negative externalities be compensated?
5. Why are most environmental externalities public bads?

Reading

Textbooks

Kolstad, C. (2000) *Environmental Economics*. Chapter 3 (Social Choice: How much environmental protection). Chapters 5 (Market Failure: Public Bads and Externalities), 6 (Property Rights), 7 (Pigovian Fees).

Gravelle, H. and R. Rees (2004) *Microeconomics*, 3rd edition, Chapter 13 Part C (pages 289-293). *Covers criticisms of the compensation principle*.

Baumol, W.J. and W.E. Oates (1988), *The theory of environmental policy*, Second Edition, Cambridge University Press. Chapters 2 (Relevance and the theory of externalities), 3 (Externalities: definition, significant types, and optimal-pricing conditions), 4 (Externalities: formal analysis). *Key reading for the externalities questions (2-5).*

Articles

Kaldor, Nicholas, 'Welfare propositions of economics and inter-personal comparisons of utility', *Economic Journal*, 49 (1939), pp. 549–52.

Hicks, J. R., 'The foundations of welfare economics', *Economic Journal*, 49 (1939), pp. 697–712.

Scitovszky, Tibor de, 'A note on welfare propositions in economics', *Review of Economic Studies*, 9 (1941), pp. 77–88.

Gorman, W. M., 'The intransitivity of certain criteria used in welfare economics', *Oxford Economic Papers*, 7 (1955), pp. 25–35.

Coase, R. (1960) "The Problem of Social Cost", *Journal of Law and Economics*, 3, 1-44. Reprinted in W.E. Oates, ed. *The Economics of the Environment*, Edward Elgar. *The classic paper on private bargaining solutions*.

Farrell, J. (1987) "Information and the Coase Theorem", *Journal of Economic Perspectives*, Vol 1, No 2, pp 113-129. *Shows that asymmetric information causes problems for the Coase theorem*.

Topic 2: Intergenerational ethics I
Rights-based approaches and the non-identity problem; applications (including biodiversity, climate change)

Questions

Do we infringe the rights of future people when we leave them a polluted world?

Parfit argues that the non-identity problem should make no difference to our moral judgements. Is he right?

Reading

Melinda Roberts, 'The non-identity problem', *Stanford Encyclopedia of Philosophy*.

Thomas Schwartz, 'Obligations to Posterity', in *Obligations to Future Generations*, edited by R. Sikora and Brian Barry, Temple University Press, 1978, pp. 3–13.

Gregory Kavka, 'The Paradox of Future Individuals', *Philosophy and Public Affairs*, 11 (1981), pp. 93–112.

Derek Parfit, *Reasons and Persons*, Oxford University Press, 1984, chapter 16.

Elizabeth Harman, 'Can We Harm and Benefit in Creating?', *Philosophical Perspectives*, 18 (2004) pp. 89–113.

John Broome, *Climate Matters*, Norton, 2012, chapter 4.

Topic 3: Humans, animals and the environment

Essay question: What is the range of entities (e.g. adult humans, all humans, all intelligent creatures, all sentient creatures, all living things, all systems capable of reproduction, ...) whose interests have moral weight? To what extent does a concern for the welfare of non-humans support environmentalism?

Core reading:

Singer, P. "All animals are equal." In Tom Regan and Peter Singer (eds.), *Animal Rights and Human Obligations*, New Jersey, 1989, pp. 148-162. Available online at e.g. http://www.animal-rights-library.com/texts-m/singer02.pdf.

Goodpaster, K. E. "On being morally considerable." The Journal of Philosophy, Vol. 75, No. 6 (Jun., 1978), pp. 308-325.

Williams, B., 1992. "Must a Concern for the Environment be Centred on Human Beings?", reprinted in his *Making Sense of Humanity and Other Philosophical Papers*, Cambridge: Cambridge University Press, 1995: 233-40.

Næss, A., 1973. "The Shallow and the Deep, Long-Range Ecology Movement", *Inquiry* 16, reprinted in Sessions 1995, pp. 151-5.

Elliott Sober, "Philosophical Problems for Environmentalism", in *The preservation of species: The value of biological diversity*, ed. Bryan G. Norton, Princeton University Press, 1986. Available on Weblearn.

Mark Sagoff. "Animal Liberation and Environmental Ethics: Bad Marriage. Quick Divorce," *Osgoode Hall Law Journal* 22 (1984): 297-307. Available on Weblearn.

Further reading:

Thomas Hill, "Ideals of Excellence and Preserving the Natural Environment,"
Sketch of a virtue-ethical account of why one might value nature beyond its use as a resource for sentient beings.

Aldo Leopold, "The Land Ethic," in his *The Sand County Almanac*. Reprinted in *The environmental ethics and policy book*, Donald VanDe Veer and C. Pierce (eds), Wadsworth 2003.

Pierre Hadot, *The Veil of Isis,* Harvard University Press, 2006.
A survey of ways of thinking about the man-nature relationship through history.

Topic 4: Sustainability, natural capital and trade-offs, the Hartwick rule

Questions

1. What is a sustainable growth path?

2. Is natural capital "special" or can it be substituted for by physical and human capital?

3. What is the optimal depletion rate for (a) non-renewable and (b) renewable resources?

Reading

Heal, G (1998) *Valuing the future*: *economic theory and sustainability*. Columbia University Press. Chapter 1.

Helm, D (2011) "The Sustainable Borders of the State". *Oxford Review of Economic Policy*. Winter 2011, 27(4), 517-535.

Dasgupta, P (2012) Natural Capital as an Economic Asset. Chapter 6 in UNU-1HDP and UNEP (2012) Inclusive Wealth Report 2012: measuring progress towards sustainability. Cambridge University Press.

Solow, R. M. (1974) "The economics of resources or the resources of economics" *American Economic Review Papers and Proceedings,* 64, pp. 1–14.

Topic 5: Cost-benefit analysis (CBA) and the environment - valuation techniques

Essay questions

Answer each of the following questions briefly. Your answer should be 1500-2000 words in total

1. What is meant by "contingent valuation"? Illustrate your definition with a (made-up) example of a possible contingent valuation question for a proposed environmental improvement. Discuss the strengths and weaknesses of your question, as a means to discover the true preferences of respondents.
2. Explain how house prices might be used in a hedonic price analysis to measure the benefits of policy measures to reduce the level of aircraft noise.
3. Explain how averting behaviour and defensive expenditure can be used to measure the potential benefits of environmental improvements.

Applied CBA and techniques

Kolstad, C. (2000) *Environmental Economics* Chapters 16 (Hedonic Price Methods), 17 (Household Production), 18 (Constructed Markets).

Pearce, D., Atkinson, G. & Mourato, S. (2006). *Cost-Benefit Analysis and the Environment: Recent developments*. OECD: Paris. Chapters 2 (Foundations of CBA), 4 (Decision Rules), 7 (Revealed preference methods), 8 (Stated preferences: Contingent Valuation).

*Symposium on Contingent Valuation, *Journal of Economic Perspectives*, 1994, Vol 8, No 4, pp 3-64. *Three articles on controversies over contingent valuation*.

*Symposium on Contingent Valuation, *Journal of Economic Perspectives*, Fall 2012. Vol 26, No 4. *Three more articles covering recent developments and critiques of contingent valuation*. http://www.aeaweb.org/articles.php?doi=10.1257/jep.26.4

Pearce, D. (1998), "Cost-Benefit Analysis and Environmental Policy", *Oxford Review of Economic Policy*, 14(4): 84-100. *Discusses how CBA affects policy*.

Pearce, D. (1991), "An economic approach to saving the tropical forests", in Dieter Helm (ed) *Economic Policy towards the Environment*, Blackwell.

Johansson, P-O. (1990) "Valuing Environmental Damage" *Oxford Review of Economic Policy*, Vol 6, No 1, pp 34-50

Jones-Lee, M. (1990) "The value of transport safety" *Oxford Review of Economic Policy*, Vol 6, No 2, pp 39-60

The following readings are optional at this stage: they deal with the foundations of CBA.

Jean Dreze and Nicholas Stern, 'The theory of cost-benefit analysis', in Alan J. Auerback and Martin Feldstein (eds), *Handbook of Public Economics*, Volume II, North-Holland, 1987, pp. 909-89.

John Broome, 'Valuing policies in response to climate change: some ethical issues' available at http://users.ox.ac.uk/~sfop0060/

John Broome, 'Structured and unstructured valuation', *Analyse & Kritik*, 16 (1994), pp. 121–32. Reprinted in J. Broome, *Ethics Out of Economics*, pp. 183–95.

Kahneman, Daniel, and Knetsch, Jack L., 'Valuing public goods: the purchase of moral satisfaction', *Journal of Environmental Economics and Management*, 22 (1992), pp. 57-70.

Gowdy, J. (2004). The revolution in welfare economics and its implications for environmental valuation and policy. *Land Economics*, 80: 239-257.
O'Neill, J. 'Markets and the Environment: The Solution is the Problem' *Economic and Political Weekly*, 36, 2001, pp.1865-1873.

Holland A. (1995) 'The Assumptions of Cost-Benefit Analysis: A Philosopher's View' in K. Willis and J. Corkindale eds. *Environmental Valuation: New Perspectives*)

Topic 6: Intergenerational ethics II: discounting

Questions

Is there any good reason for valuing future wellbeing less than present wellbeing?

When, if ever, would it be right to apply a negative discount rate to some commodity?

Reading

Robert C. Lind, 'A primer on the major issues relating to the discount rate for evaluating national energy policy', in *Discounting for Time and Risk in Energy Policy*, edited by Robert C. Lind et al, Resources for the Future, 1982, pp. 21–94.

Joseph Stiglitz, 'The rate of discount for benefit-cost analysis and the theory of second best', in *Discounting for Time and Risk in Energy Policy*, edited by Robert C. Lind et al, Resources for the Future, 1982, pp. 151–204.

Tyler Cowen, "Consequentialism implies a zero rate of intergenerational discount", in Justice Between Age Groups and Generations, edited by Peter Laslett and James S. Fishkin, Yale University Press, 1992, pp. 162-8.

Derek Parfit, Appendix F in *Reasons and Persons*, Oxford University Press, 1984.

Kenneth Arrow et al, 'Intertemporal equity, discounting and economic efficiency', chapter 4 in *Climate Change 1995: Economic and Social Dimensions of Climate Change*, (Contribution of Working Group III to the Second Assessment Report of the Intergovernmental Panel of Climate Change), Cambridge University Press, 1996.

Kenneth Arrow, 'Discounting, morality, and gaming', in *Discounting and Intergenerational Equity*, edited by P. R. Portney and J. P. Weyant, Resources for the Future, 1999, pp. 13–21.

John Broome, *Climate Matters*, Norton, 2012, chapter 4.

Topic 7: Population

Essay question: Answer BOTH part (a) and part (b). Your answer should be 1800-2500 words in total.
a) Should we accept Parfit's "Repugnant Conclusion"? If not, how should it be avoided?
b) How should the value of a human life be decided, for the purposes of public policy?

Core reading:

Derek Parfit, *Reasons and Persons*, Part 4 (especially chapter 17, "The repugnant conclusion"). OUP, 1984.

Yew-Kwang Ng, 'What should we do about future generations? The impossibility of Parfit's Theory X'. *Economics and Philosophy,* 5, 1989, 235-253.

John Broome, *Weighing Lives*, chapter 10 ("The neutral level for existence"). OUP, 2004.

Schelling, "Value of life", in Eatwell et al (eds), *The new Palgrave*, vol 4, 1987.

E. Mishan 1971: "Evaluation of life and limb: a theoretical approach", Journal of Political Economy, vol 79, 1971, pp687-705.

J. Broome, "Trying to value a life", Journal of Public Economics 9 (1978), pp.91-100.

Further reading:

Thomas Malthus, *An essay on the principle of population*. Available online at http://www.esp.org/books/malthus/population/malthus.pdf.

Paul R Ehrlich, *The population bomb*. Buchaneer Books, Cutchogue, NY, c1971.

Garret Hardin, The tragedy of the commons. *Science*, New Series, Vol. 162, No. 3859. (Dec. 13, 1968), pp. 1243-1248.

John Broome, *Weighing Lives*. OUP, 2004.

Needleman, "Valuing other people's lives", Manchester School of Economics and Social Studies, v 44, 1976.

Jones-Lee (ed) The value of life and safety. Start with the preface (which provides an overview of the papers in the volume, as well as of the subject in general), then move on to the papers as your interest dictates.
(This publication is not widely available in Oxford. Currently you can read it in/borrow it from Nuffield College library.)

And/or follow up the references in Schelling's survey article.

Topic Eight: The choice of instruments: taxes, permits and command and control; justice in the allocation of emissions

Questions

Answer all the following questions. Questions 1-4 should each be answered briefly. Question 5 is an essay question.

1. Explain the circumstances under which the following hold:
    a. there is no difference between tax and permit systems;
    b. a tax is preferable;
    c. a permit system is preferable.
2. Outline how a hybrid scheme of taxes, subsidies and permits works and how it improves on a pure tax and a pure permit system.
3. When is a subsidy to abatement equivalent to a tax on pollution? When are they different, and which is preferable when they are different?
4. If economic instruments are so good, why is command and control still used as an environmental policy instrument?
5. Does the fact that Western countries have emitted more greenhouse gases in the past justify assigning to those countries a higher per capita emission right, a lower per capita emission right, or neither, for future emissions?

Reading

Economics of instruments

Kolstad, C. (1999) *Environmental Economics* Chapters 8 (Regulating Pollution), 9 (Emission Fees and Marketable Permits), 10 (Regulation with unknown control costs)

Baumol, W.J. and W.E. Oates (1988), *The theory of environmental policy*, Second Edition, Cambridge University Press. Chapters 5 (Uncertainty and the choice of policy instruments), 6 (Market imperfections), 11 (Efficiency without optimality), 12 (Marketable emission permits), 14 (Taxes versus subsidies).

Hepburn, C. (2006) "Regulation by Prices, Quantities or Both: A Review of Instrument Choice", *Oxford Review of Economic Policy*, 22(2), 226-247. Available at http://economics.ouls.ox.ac.uk/12828/1/hepburn%2520(2006,%2520oxrep)%2520regulation%2520by%2520p%2520or%2520q.pdf

(or Hepburn, C. (2009), "Carbon taxes, emissions trading, and hybrid schemes", Chapter 18 in *The Economics and Politics of Climate Change*, ed. Helm and Hepburn, 2009, OUP.)

Weitzman, M. (1974), "Prices vs Quantities", *Review of Economic Studies*, Vol 41, pp 477-491. Reprinted in W.E. Oates, ed. *The Economics of the Environment*, Edward Elgar.
The classic paper on instrument choice under uncertainty.

Roberts, M. and M. Spence (1976) "Effluent Charges and Licenses under Uncertainty", *Journal of Public Economics*, 5, 193-208. Reprinted in W.E. Oates, ed. *The Economics of the Environment*, Edward Elgar.

Argues that hybrid schemes dominate permits and taxes.

Hahn, R.W. (1989) "Economic Prescriptions for Environmental Problems: How the Patient Followed the Doctor's Orders", *Journal of Economic Perspectives*, Spring 1989, Vol 3(2), 95-114. Reprinted in W.E. Oates, ed. *The Economics of the Environment*, Edward Elgar. *Discusses the experience with economic instruments*.

Justice in the allocation of emissions

Neumayer, E. (2000) 'In Defence of Historical Accountability for Greenhouse Gas Emissions', *Ecological Economics* 33, 185-192

Caney, S. (2006). 'Environmental Degradation, Reparations, and the Moral Significance of History.' *Journal of Social Philosophy* 37 (3):464–482

Meyer, L & Roser, D. (2006): "Distributive Justice and Climate Change. The Allocation of Emission Rights." Available at http://www.uni-graz.at/lukas.meyer/texte/Meyer%20Publi_5.pdf

Miller, D. (2009) 'Global Justice and climate change: how should responsibilities be Distributed?' in Tanner Lectures on Human Values 28, 117-156.