Counting the cost

Can cost-benefit analysis solve the problem of assessing environmental risk?

Risk and Reason: Safety, Law, and the Environment by Cass R. Sunstein

Cambridge University Press: 2002. 352 pp. £25, \$30

Raymond T. Pierrehumbert

How much would you pay to save an isopod? What's that, you say, they're slimy little devils that you'd rather see exterminated? Keep your pencils sharp, because your answers to this and a few thousand other questions (how much would we have to pay you to let us expose your children to malaria?) will be used to determine whether it's worthwhile trying to halt global warming. Oh, and by the way, please let us know how you think the next hundred generations of your descendants will value these things, too.

Risk and Reason — a rather sprawling book by legal scholar Cass Sunstein - covers a lot of interesting territory pertinent to environmental regulation. The main theses are that people can't be trusted to judge rationally the risks they face, and that the answer to this problem is a priesthood of government technocrats who carry out cost-benefit analysis (CBA) insulated from judicial review and pressure by advocacy groups. Unlike those who declare that things are great and getting better all the time - a view espoused by the likes of Bjørn Lomborg, Gregg Easterbrook and Aaron Wildavsky - Sunstein is no ecopollyanna. He admits the reality of environmental problems and, while disparaging the methods of what he calls "70s environmentalism", he copiously celebrates its accomplishments. His stated goal is to get people to "listen to their values, not their mistakes", and I have no reason to doubt the sincerity of this intent. My fear is that Sunstein's cost-benefit state would succeed only in getting people to listen to the mistakes of their accountants instead.

Much of Risk and Reason is devoted to analysing ways in which the public has overreacted to supposedly small risks. Sunstein rather too readily, in my view, buys into the premise that toxic sludge is (relatively) harmless. But let us concede that the means by which society allocates resources to various risks is flawed. Is CBA a useful tool for improving the situation? The difficulty faced by CBA is that the complete description of the effect of an action consists of an exceedingly long list of characteristics that generally share no common yardstick for quantitative comparison with each other. These include such things as lives lost, disease incidence, species extinction, habitat loss and loss of freedoms, as well as uncertainties in estimates and the distribution of



Saving the world: the Whole Earth Jamboree typified the environmental movement of the 1970s.

effects among the millions of affected parties.

Economists often like to collapse this enormous space onto a one-dimensional scale called 'utility' (money, to the rest of us). Trying to understand cost-benefit trade-offs in this way is like trying to understand the structure of the Eiffel Tower by squashing it flat and rolling it into a wire. Reduction to utility destroys the information that people need to make value judgements, and leads to such absurdities as an early Intergovernmental Panel on Climate Change (IPCC) report that valued the life of a New Yorker as equal to 15 African lives. The discounting required to deal with the future in CBA is also problematic: at a 3% discount rate, it is better to save 100 lives this year than to avoid the extinction of the entire human race in 650 years. Sunstein is aware of such problems, but sees their solution as mere technicalities to be dealt with by the appropriate agencies.

In contrast, Amartya Sen in *Rationality* and *Freedom* (Harvard University Press, 2002) concludes that the sort of CBA that Sunstein mostly advocates is "not so much a discipline as a dream". But Sen offers much wisdom about the prospects for construing costs and benefits more broadly. Environmental justice can also be founded on a theory of rights, such as for free speech. Peter Singer's perceptive essays in *One World* (Yale University Press, 2002) provide an invigorating discussion of this perspective, which is encountered only briefly in *Risk and Reason*.

Sunstein says that CBA does not necessarily stack the decks in favour of industry groups seeking to obstruct regulations, but he provides scant reason for such optimism. He cites the Montreal Protocol as an example of a treaty that was stimulated by CBA, but the history of this treaty reveals little use of the CBA but much use of the familiar methods of '70s environmentalism. And the case law reviewed here is all anti-regulatory. Indeed, the efforts of the present US administration to strengthen the role of CBA are hardly encouraging, particularly the tendency to fill advisory panels with members who will provide ideologically reliable advice. Having seen some "2000s environmentalism" in action, the '70s type looks distinctly attractive to me.

Surely it is worthwhile to pursue costeffectiveness in achieving an agreed goal, to make better use of sound science in policy, and to allow more open discussion of costs as one factor among many - none of which require CBA. Risk and Reason does reveal all this, but only after you've mustered the fortitude to look past its overarching technocratic vision. In a democracy, there is no substitute for a plurality of well-informed voices, something that, at times, seems to make Sunstein distinctly nervous. Interest groups from Greenpeace to the American Petroleum Institute, and trusted authorities such as the IPCC, all have their place in the chorus. But there will be little hope of the public making sense of the cacophony without efforts to address the appalling state of science education. Raymond T. Pierrehumbert is in the Department of the Geophysical Sciences, University of Chicago, Chicago, Illinois 60637, USA.