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EDITORIAL

Environmental wars

'The lady doth protest too much, methinks.'

Hamlet, Act III, Scene 2

'There are three kinds of lies: Lies,
damned lies and statistics.'

— Benjamin Disraeli

The environmental debate can be raucous, unrestrained and entertaining. The depredations of development are all too obvious to green activists, whose protests are compellingly dramatic. Conservative economists (and politicians) are generally prone to dismiss the entire spectrum of environmental concerns as the hysterical outpourings of an extremist fringe. In the middle are a large body of respectable, environmental scientists and policy makers, who attempt to assess the growing body of facts, that must provide the basis for building predictive models for the future, which in turn may be crucial in charting the course of developmental strategies. *The Economist* (2 February 2002, p. 71) lists four, much touted environmental fears:

- Natural resources are running out.
- The population is ever growing, leaving less and less to eat.
- Species are becoming rapidly extinct, forests are vanishing and fish stocks are collapsing.
- Air and water are becoming ever polluted.

It is this 'litany' of concerns that has been addressed by a hitherto little known Danish analyst, Bjorn Lomborg, who teaches statistics in the political science department of the University of Aarhus. Lomborg has taken the environmental world by storm, publishing a book, *The Skeptical Environmentalist* (Cambridge University Press, 2001). His thesis, simply stated, is that the litany of environmental concerns is exaggerated and unfounded; we have little to worry and we can dismiss all fears for our environment as the pessimistic projections of 'prophets of doom and gloom'. Lomborg's views may never have become a subject of public debate if it had not been for the ferocity with which his book has been attacked in reviews in science journals. Both *Nature* and *Science* published devastatingly dismissive

reviews, while *Scientific American* took the extraordinary step of putting together a collection of four essays attacking Lomborg's thesis, under the provocative title 'Misleading Math about the Earth'. For good measure, the editor highlighted the section with the blurb 'Science defends itself against the Skeptical Environmentalist' (*Scientific American*, January 2002, pp. 59–69). Who is Lomborg and why is the environmental science establishment aroused to such fury?

Bjorn Lomborg, in the words of one of his many critics, 'occupies a very junior position in Denmark (an associate professor does not exactly mean the same thing that it does in the United States), he has one probably very flawed paper in an international journal on game theory, no publications on environmental issues, and yet manages to dismiss the science of dozens of the world's best scientists, including Nobel laureates, Japan and Crawford prize winners and the like' (*The Economist*, 2 February 2002, p. 71). In his own words, Lomborg, was intrigued by the view of an American economist, Julian Simon, who argued that 'our doomsday conceptions of the environment are not correct'. Simon, according to Lomborg 'maintained that much of our traditional knowledge about the environment is quite simply based on preconceptions and poor statistics'. Lomborg describes himself as 'an old left-wing Greenpeace member' who 'for a long time had been concerned about environmental questions'. He adds: 'At the same time I teach statistics, and it should therefore be easy for me to check Simon's sources. Moreover, I always tell my students how statistics is one of science's best ways to check whether our venerable social beliefs stand up to scrutiny or turn out to be myths.' And, it is indeed statistics and their interpretation that seems to be at the heart of the battle. Stuart Pimm and Jeff Harvey in a harshly-worded critique, join issue: 'Lomborg's great optimism about humanity's future shows up in the way he presents statistics. In the hell-hole that is so much of sub-Saharan Africa, "starving people" constituted "38 percent in 1970"... (but only) "33 percent in 1996". (The percentage is) expected to fall even further to 30 percent in 2010.' The absolute numbers of starving are curiously missing from these paragraphs. Roughly, the region's population doubled between 1970 and 1996. To keep the numbers of starv-

ing constant, the percentage would have had to have dropped by more than half. The absolute number of malnourished in the region ... is surely inconsistent with the first-listed 'global trend' in a chapter entitled 'Things are getting better' (*Nature*, 2001, 414, 149). Lomborg's response to this criticism is to raise a question: Should we use absolute or relative figures 'when we look at a problem such as hunger or a shortage of pure drinking water'? There are many situations in which one figure increases while the other decreases, making judgements contentious. But, it is Lomborg's use of developmental statistics, put out by international agencies, the United Nations and subsidiary organization and, of course, the World Bank and the International Monetary Fund, which is calculated to raise the most hackles. Lomborg's mining of data is 'curiously selective' and as pointed out by Michael Grubb he 'pays inadequate attention to serious environmental problems in developing countries and his casual assumption that they too will improve as we all get richer' show a 'stunning lack of attention to cause and effect' (*Science*, 2001, 294, 1285). But, Lomborg is not without supporters, with *The Economist* calling his book 'one of the most valuable books on public policy – not merely on environmental policy – to have been written for the intelligent reader in the past ten years'. The magazine extols Lomborg for 'insisting on statistical probity' and commends him for bringing 'another intellectual virtue to the task; an interest in feasible alternatives'.

Lomborg's thesis and the vigorous debate it has engendered highlight the contentious nature of discussions of environmental policy. Lomborg's detractors, the es-

tablishment of environmental sciences, have protested a shade too loudly; the lesson of Queen Gertrude in *Hamlet* evidently forgotten. The inevitable backlash from the conservative opponents of environmental causes is likely to be strong, undoubtedly emboldened by Lomborg's clever use of establishment statistics. Lomborg's supporters might, however, do well to remember that their principal weapon, selective statistics, can be a double-edged sword. Mark Twain in his autobiography immortalized Benjamin Disraeli's famous characterization of lies, damned lies and statistics.

But, in our own surroundings we hardly need the crutch of statistics to come to conclusions about the effects of development on our environment. The push for 'development at all costs' is an approach that may lead to a high environmental price. In Lomborg's Denmark or the Western campuses of his critics, the quality of life may indeed be getting better. The price is paid, however, by others. In much of the developing world environmental concerns are real and must be carefully balanced with the imperatives of development. The choices are often hard and statistics does not always help to clarify the decision-making process. The need for ensuring food and water security in poor countries is real and pressing; the need to clean up the air in the major centers of the South is immediate; receding forests and loss of biodiversity are a reality in many areas of the developing world. Sitting back and enjoying Lomborg's unbridled optimism for our environmental future may not be an advisable strategy.

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