

ECOLOGICAL SOUNDING

On being economical with the environment

‘Preserving and improving the environment is never a free option: it costs money and uses up real resources’ (Pearce, Markandya & Barbier, 1989)

According to some environmental economists, preserving and improving the environment **rationally** and **efficiently** requires attaching cash prices not only to the real resources that will be used up, but also to the environment at risk. Clearly, they argue, it would be wasteful to spend money on preserving or improving something if the costs were greater than the benefits; rational decision-making about the environment requires, therefore, that **all** the relevant costs and benefits be priced. ‘Conceptually’, they insist, this presents no problems. ‘Practically’ and ‘technically’, however, they admit to difficulties.

The main problem concerns the pricing of things for which there is no conventional market. Clean air, peace and quiet, habitats of endangered species, views with nostalgic associations, buildings or places considered sacred, life, and global climatic stability all present unresolved practical and technical cash valuation problems.

Economists approach the task of valuing costs and benefits with two alternative pricing concepts: ‘willingness to pay’ (WTP), and ‘willingness to accept compensation’ (WTA). The product of a project, say the electricity generated by a nuclear power station, is a benefit for which people are willing to pay. This for economists is straightforward. They can make forecasts of future supply and demand and consult market prices to produce an estimate of what people would be willing to pay for the electricity to be produced by the power station.

The problems arise when they come to measure the costs of the project. Beyond the construction costs there will be various local costs borne by people whose land is required and by other people who enjoy the natural environment that is to be built upon. Distributed more widely – geographically and temporally – are the risks associated with nuclear power. Chernobyl has demonstrated the capacity of nuclear power stations to poison vast areas and harm future generations. How should these costs be estimated? To ask people how much they would be prepared to pay to prevent a part of their birthright being taken away, or to avoid being poisoned, would be a form of blackmail – like the probing of an extortionist trying to find out how much a supermarket owner might pay not to have goods on his shelves poisoned. In addition to the moral unacceptability of blackmail, there is the further point that willingness-to-pay measures are strongly influenced by income – the rich can afford to pay more to fend off developments that they don’t want.

A **fair** cost–benefit analysis requires that the benefits of a potential project should be valued in terms of what the would be beneficiaries would be prepared to pay, and the costs should be valued in terms of what the potential losers would be prepared to accept as full compensation. Thus the cost–benefit analyst is stuck with the job of trying to ascertain what the losers are willing to accept. This has proved an intractable problem.

For environmental goods that are not traded in markets there is no way of deducing willingness-to-accept values from market behaviour. The only way of finding out what people will accept as fair compensation is to ask them. When this is done the answers that the economists

receive are often unusable. People are suspected of either being dishonest – stating a high figure in hopes of a windfall gain – or ‘irrational’ – either refusing to state a figure, or saying in effect ‘infinity’, insisting that no amount of money would compensate them for their loss. Since it takes only one infinity to wreck a whole cost–benefit analysis, taking willingness-to-accept answers at face value renders the cost–benefit method useless; it gives every prospective loser a veto.

According to economic theory, WTP and WTA should be the same. Where they differ, economists tend to blame the empirical studies rather than the theory (Pearce & Turner, 1990). Because of this, cost–benefit analysts routinely, as a matter of expediency, use willingness-to-pay measures for both costs and benefits.

The following passage illustrates the confusion that economists fall into when they are in the habit of thinking that WTP and WTA are interchangeable measures of the same thing.

‘There are two interpretations that might be placed on the idea that something is priceless. The first is that priceless objects are of infinite money value. When art experts speak of priceless works of art, however, they do not mean that they have infinite values. ...A moment’s reflection will indicate that no *one can or would pay* an infinite price for them. So it is with the condor and the rhinoceros; their preservation is worth very large sums of money – many of us *would pay* substantial sums to see them preserved – but none of us values them at an infinite price. ...We do not act as if human life, for example, is outside our capacity to value things in money terms. We quite explicitly draw boundaries round the kinds of *expenditures that we are prepared to make* to save life. Thus while there remains a quite warranted suspicion that the process of money valuation is illicit in some context, the reality is that choices have to be made in contexts of scarce resources. Money as a measuring rod is a satisfactory means of proceeding’ (Pearce *et al.*, 1989, my emphasis).

The boundary that is drawn around the expenditures that we are **willing to pay** to save lives, or rhinos or condors, is forced upon us by our finite wealth. No such limit exists with respect to our **willingness to accept** compensation. Consider the case of a wealthy developer, such as a mining company, wishing to exploit a site, such as Kakadu National Park in Australia, which is sacred to the penniless aborigines who live there. The sum that the aborigines are willing/able to pay to defend Kakadu is pitifully small compared to the fortune at the disposal of the developers. To ask them what they would be prepared to accept as compensation for something that their culture holds sacred would be to attempt to corrupt them; that which is truly sacred is not for sale.

In an attempt to salvage something from their cost–benefit method, the economists of the Australian Resource Assessment Commission conducted a survey in which they asked a random sample of 2034 people how much they would be prepared to pay to stop mining in Kakadu. The answers ranged from \$52 to \$128 per year. The defenders of Kakadu argued that since this sort of money given by all Australians would exceed the earnings from the mine, the mine ought not to be permitted. The mining company replied that the survey results were ‘nonsensical’ and ‘unscientific’ (Anderson, 1991).

One of the main justifications that economists give for monetizing debates, such as that over the fate of Kakadu, is that money is the language of treasuries and big-business, and that it is necessary to address such influential interests in terms that they understand. But treasuries and big-business are better equipped than most to notice when someone is speaking nonsense in their lan-

guage. The numbers yielded by surveys, such as the Kakadu one, are nonsense because they float free of any context that can give them meaning. If Kakadu were placed in a list of all the endangered species in the world, and habitats, and cultures, and works of art, and historic buildings ..., and if people were invited to say, item by item, how much they were prepared, and able, to pay each year for their preservation, **and** required to hand over the money, then the figures might mean something – but for each item, including Kakadu, they would be exceeding small.

The whole surreal exercise of attempting to attach price tags to the priceless is driven by a false premise – the premise set out in the opening quotation: ‘preserving and improving the environment is never a free option: it costs money and uses up real resources’. More often than not it is not only free, it saves money. The global scale of the environmental degradation that we are now witnessing is the result of careless and excessive consumption. The economist’s conviction that preserving and improving the environment is never a free option blinds him to what is often the most obvious solution – reduced consumption. There are expensive ways by which a fat person can lose weight – health farms, exercise machines, liposuction – but walking or cycling to work and eating less are likely to be more effective and actually **save** money. Before deciding to lose weight one does not need to calculate the cash value of being slimmer and then work out whether or not one can afford it. Perhaps an economist would.

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