



“Summary of article by Mark Sagoff: Some Problems with Environmental Economics” in Frontier Issues in Economic Thought, Volume 1: A Survey of Ecological Economics, Island Press: Washington DC, 1995. pp. 276-279

Social Science Library: Frontier Thinking in Sustainable Development and Human Well-being

“Summary of article by Mark Sagoff: Some Problems with Environmental Economics”

Economists are increasingly using contingent valuation methods "to assess the economic value of recreation, scenic beauty, air quality, water quality, species preservation, and bequests to future generations."¹ These methods attempt to determine individuals' willingness-to-pay to preserve natural environments (preservation or existence values), to maintain the option of using natural environments (option values), and to bequeath natural environments to future generations (bequest values). This paper argues against the defense of the contingent valuation method put forward by Steven Edwards in his article "In Defense of Environmental Economics," and then describes the outcome of an experiment conducted in Wyoming.

EDWARDS' DEFENSE OF ENVIRONMENTAL ECONOMICS

Edwards' first point in defense of the contingent valuation method is that a relationship exists between an individual's willingness-to-pay and personal utility. His argument is that as people's incomes increase, so will their level of happiness, as they can procure more things that provide satisfaction. However, there is no empirical evidence that supports this claim. Albert Hirschman has pointed out that consumption can lead to both satisfaction and disappointment, and, according to Frank Knight, it is the education of desire, not necessarily its satisfaction, that leads to happiness. It is therefore wrong to argue that willingness-to-pay reflects the level of happiness that individuals will obtain if the purchase is actually made. In fact, resource economists define personal utility as that which willingness-to-pay measures; the two terms are interchangeable, and the relationship between them is purely tautological.

Edward's second point is that the economic analysis that is applied to traditional markets (i.e., markets in which buyers and sellers transfer property voluntarily at agreed upon prices) can be extended to contingent markets. In effect, Edwards is arguing that the kind of economic analysis that is used to assess private markets can be extended to publicly owned resources, and that public resources should be auctioned off to the highest bidder. The problem with this line of reasoning is that in private markets individuals do not have to sell to the highest bidder. In technical terms, property rights in traditional markets are backed by property rules that allow the owner the right to exclude or not to transfer. When property rights are instead backed by liability rules, then the property must be sold to the highest bidder. The nature of property rights is therefore important in determining the nature and rules of transactions in markets. The economic analysis that Edwards defends creates an abstraction of the marketplace, without the ideals of exclusivity and consent, to justify the auctioning of public resources to the highest bidder. If, on

the other hand, property rights are taken seriously, then the public may prefer not to sell at any price at all.

In many cases, respondents in contingent valuation surveys refuse to indicate the price at which they are willing to buy or sell environmental goods and resources. Why is this so? Edwards argues that respondents are indulging in strategic behavior in order to influence the final outcome, and he claims that they are misrepresenting their actual thoughts. However, it may be that respondents are motivated not by an attempt to deceive, but by the belief that environmental policy - with its ethical, cultural and aesthetic aspects - should be discussed and debated before decisions are made. In other words, respondents may be suggesting that the democratic process, not prices at the margin, should determine the moral and political questions involved in environmental policy. Or respondents may be aware that a number of publicly owned environmental resources are not marketable by statute, and they may therefore be unwilling to assist in a "backdoor" cost-benefit analysis of these resources. Finally, respondents may see through the circular definitions of utility used in these surveys. Whatever the actual reason, Edwards' claim that it is simply strategic behavior shows his unwillingness to take liberty and consent seriously.

TANGIBLE AND INTANGIBLE VALUES

The Clean Air Act and the Endangered Species Act dictate certain environmental regulations and standards on aesthetic and ethical grounds. Even the most ardent environmental idealist will acknowledge that at some point these regulations impede economic growth. We must then ask how much regulation is appropriate? This question is made more difficult by the fact that a number of these aesthetic and ethical considerations are intangible and unmarketable, and therefore do not have market prices.

TWO APPROACHES TO RATIONALITY

There are two senses in which the economic approach to environmental policy can be described as "rational" and "scientific." In the first, a decision is rational if it uses mathematical criteria and methodologies that are laid down in advance to arrive at conclusions based on exogenous preferences. Economists approach rational decisions in this framework by collecting data on prices and consumer preferences to determine the trade-off between environmental protection and economic development.

The second sense in which a decision can be seen as rational or scientific is if it is reasonable or sane according to a set of moral virtues: tolerance, respect for others' views, willingness to listen, and reliance on persuasion rather than force. This second notion of a rational decision depends on an open decision-making process that takes legal, ethical, technical, economic and other realities into account. The conflict between these two methods arises when determining how much information should be presented, or how much discussion, deliberation and education should be allowed in a survey. For the decision to be scientific in the first sense no discussion should be allowed, as it may influence people's views, i.e., the exogenous variables. However, without deliberations and discussions the decision will not be rational and scientific in the second sense.

THE WYOMING EXPERIMENT

Adopting the economic notion of rational and scientific, three economists at the University of Wyoming undertook a study to determine the value of an intangible good: atmospheric visibility.² Atmospheric visibility is one of the requirements of the Clean Air Act. The economists showed a variety of people photographs with different degrees of visibility and asked them two questions:

- a) How much would they be willing to pay to prevent a given deterioration in visibility (as demonstrated by comparing two of the photographs) that would be caused by a power plant?
- b) How much should they be compensated if a loss of visibility does occur?

The economists had to decide whether they should explain to their subjects why the change in visibility would occur, since respondents' opinions might vary depending on whether the change would be caused by nature (e.g., an approaching storm) or by smokestacks from a coal-fired utility plant. When the respondents were informed that pollution from a power plant would be the cause of the visibility loss, a majority of them refused to cooperate in the survey. They rejected a cost-benefit framework for the trading of pollution rights.

Information plays a key role in determining how people feel about environmental resources and contingent markets. Rather than pretending that respondents are being strategic when they do not cooperate in contingent valuation surveys, we should realize that they are thinking, political beings who are, in fact, rejecting the methodology of the surveys.

Notes

-
1. Steven Edwards, "In Defense of Environmental Economics," Environmental Ethics 9 (1987): 80; cited by Sagoff, 55.
 2. R. Rowe, R. D'Arge and D. Brookshire, "An Experiment on the Economic Value of Visibility," Journal of Environmental Economics and Management (1980): 1.