Contingent Valuation

The ability to place a monetary value on pollution discharges or other forms of ecological degradation is a cornerstone of the economic approach to the environment (Hanemann 1994:19-43). But a damage function relating the cost to the amount of, say, pollution emissions, while conceptually straightforward, is often difficult to measure.

Contingent valuation—some suggest hypothetical valuation is more accurate--uses questionnaires from sample surveys to elicit the willingness of respondents to pay for a hypothetical program, such as a public good (for example, the environment). Economists can use interviews to simulate a market to determine how much people would pay for additional quantities of a public good. Values revealed by survey respondents may allow economists to draw a market demand schedule (Portney 1994:3-17).

But it would not work to approach people at a mall in Sao Paulo, Brazil, ask them to drop their shopping bags, and inquire about how much they are willing to pay to preserve the tropical rainforest in the Amazon River basin or a penguin in the Antarctica. W. Michael Hanemann argues that people are more willing to tell you whether they would pay some particular amount in increased taxes than to specify the maximum amount they or society generally should pay for the program. A self-

contained referendum is preferable. The enumerator should ask the Brazilian voter a concrete question such as: "If it costs you $10 taxes annually for the next twenty years for a program that will preserve 50 million hectares (124 million acres) of the Amazon River basin rainforest, would you vote for it?" The survey should use different dollar amounts for different respondents so as to trace a demand schedule that indicates willingness to pay at various prices (Hanemann 1994:22-24).

Economists have some objections to the contingent valuation method. Answering survey questions requires effort, so that some people become impatient, uninterested, or tired. Different people perceive the same questions differently, and the choice of words is so important in conveying meaning. People may respond by making up answers rather than evincing true economic preferences, whatever these may be.

How important is scope? Do people respond the same when you ask about preserving one rainforest or two rainforests, or one rainforest, then another rainforest? Peter A. Diamond and Jerry A. Hausman (1994:45-64) argue that contingent valuation surveys do not measure the preferences they attempt to measure. For example, the sequence in which a question is asked helps determine the answer: people asked a first question to pay to preserve the visibility at the Grand Canyon were willing to pay more than those asked the third question about the Canyon. How

much people were willing to pay to save the seal depended on the sequence of questions about seal and whale preservation. People's stated willingness to pay does not aggregate. Thus people are willing to pay more to preserve three wildernesses separately than the three together. Diamond and Hausman conclude that contingent valuation is deeply flawed. At a minimum, contingent valuation surveys need to be pretested so that the questions are as precise as possible. Even with careful preparation, the contingent valuation method can only find an approximate value for what is invariably difficult to measure precisely. The more you rely on measurable costs (for example, medical costs plus wages foregone for a certain number of person-years lost from air pollution), the more confidence you will have in your valuation (Hanemann 1994:27-28, 34-36).