



Paul R. Portney
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Mr. Thomas A. Campbell
General Counsel
National Oceanic and
Atmospheric Administration
U.S. Department of Commerce
Room 5816
14th and Constitution Avenue, NW
Washington, DC 20230

Dear Tom:

In behalf of co-chairs Kenneth Arrow and Robert Solow, as well as Edward Leamer, Roy Radner, and Howard Schuman, I am very pleased to submit the enclosed final report of the Contingent Valuation Panel (Panel), appointed by the Office of General Counsel to consider the reliability of the contingent valuation (or CV) methodology in measuring passive-use values of natural resources.

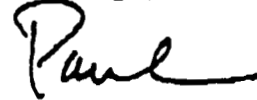
The Panel concludes that CV studies can produce estimates reliable enough to be the starting point for a judicial or administrative determination of natural resource damages -- including lost passive-use value. To be acceptable for this purpose, though, such studies should adhere closely to the guidelines described in the report. It is not necessary that every injunction be completely obeyed; however, the more closely the guidelines are followed, the more reliable the result. A CV study that is carefully constructed, administered, and analyzed will contain information that judges, juries and other decisionmakers will wish to use, in combination with other evidence, including the testimony of expert witnesses.

The report is organized in the following way. Section I is the Introduction to the report. In Section II, the drawbacks of the CV technique are discussed. Section III discusses several key issues concerning the use of the CV technique. Section IV includes guidelines to which the Panel believes any CV study should adhere if the study is to produce information useful in natural resource damage assessments. In Section V a research agenda is described. Section VI presents the Panel's conclusions in more detail.

In transmitting this report, we wish to thank you, Randall Luthi, Linda Burlington and the other members of NOAA's Damage Assessment Regulations Team for the outstanding support and assistance provided to the Panel. Your collective efforts were above and beyond the call of duty and our report is the better for them.

We hope the report will be useful in your rulemaking efforts.

Sincerely,



Paul R. Portney

Enclosure

Report of the NOAA Panel on Contingent Valuation

January 11, 1993

Kenneth Arrow
Robert Solow
Paul R. Portney
Edward E. Leamer
Roy Radner
Howard Schuman

A closely-related line of research is the sensitivity of responses in CV surveys to the number and extent of undamaged substitute commodities mentioned explicitly in the survey instrument (miles of nearby shoreline, miles of shoreline elsewhere, similarity for animal or bird life, alternative recreation possibilities and so on). This could be extended to variations in the way in which the budget constraint is presented to respondents. Here again, comparisons with market goods would be useful.

Finally, having urged that the availability of a no-vote option is an important component of the ability of the CV technique to mimic an actual referendum, we recommend further research into alternative ways of presenting and interpreting the no-vote option. In this respect, too, comparative studies with familiar public and private goods (local parks, school facilities, housing for the homeless, food distributions) would be enlightening. Real referenda always allow the option of not voting, in a natural way. CV studies have to achieve the same result more deliberately, so there is a need to know if the precise formulation matters very much to the result.

VI. CONCLUSIONS AND RECOMMENDATIONS

The Panel starts from the premise that passive-use loss -- interim or permanent -- is a meaningful component of the total damage resulting from environmental accidents. A problem arises because passive-use losses have few or no overt behavioral consequences. The faintness of the behavioral trail means that a

well-designed and adequately sensitive measuring instrument is needed to substitute for conventional observations of behavior. In particular, can the CV method provide a sufficiently reliable estimate of total loss -- including passive-use loss -- to play a useful role in damage assessment?

It has been argued in the literature and in comments addressed to the Panel that the results of CV studies are variable, sensitive to details of the survey instrument used, and vulnerable to upward bias. These arguments are plausible. However, some antagonists of the CV approach go so far as to suggest that there can be no useful information content to CV results. The Panel is unpersuaded by these extreme arguments.

In Section IV above, we identify a number of stringent guidelines for the conduct of CV studies. These require that respondents be carefully informed about the particular environmental damage to be valued, and about the full extent of substitutes and undamaged alternatives available. In willingness to pay scenarios, the payment vehicle must be presented fully and clearly, with the relevant budget constraint emphasized. The payment scenario should be convincingly described, preferably in a referendum context, because most respondents will have had experience with referendum ballots with less-than-perfect background information. Where choices in formulating the CV instrument can be made, we urge they lean in the conservative direction, as a partial or total offset to the likely tendency to exaggerate willingness to pay.

The Panel concludes that under those conditions (and others

specified above), CV studies convey useful information. We think it is fair to describe such information as reliable by the standards that seem to be implicit in similar contexts, like market analysis for new and innovative products and the assessment of other damages normally allowed in court proceedings. As in all such cases, the more closely the guidelines are followed, the more reliable the result will be. It is not necessary, however, that every single injunction be completely obeyed; inferences accepted in other contexts are not perfect either.

Thus, the Panel concludes that CV studies can produce estimates reliable enough to be the starting point of a judicial process of damage assessment, including lost passive-use values. To be acceptable for this purpose, such studies should follow the guidelines described in Section IV above. The phrase "be the starting point" is meant to emphasize that the Panel does not suggest that CV estimates can be taken as automatically defining the range of compensable damages within narrow limits. Rather, we have in mind the following considerations.

The Panel is persuaded that hypothetical markets tend to overstate willingness to pay for private as well as public goods. The same bias must be expected to occur in CV studies. To the extent that the design of CV instruments makes conservative choices when alternatives are available, as urged in Section IV, this intrinsic bias may be offset or even over-corrected. All surveys of attitudes or intentions are bound to exhibit sensitivity of response to the framing of questions and the order

in which they are asked. No automatic or mechanical calibration of responses seems to be possible.

The judicial process must in each case come to a conclusion about the degree to which respondents have been induced to consider alternative uses of funds and take the proposed payment vehicle seriously. Defendants will argue that closer attention to substitute commodities would have yielded lower valuations. Trustees will argue that they have already leaned over backwards to ensure conservative responses. Judges and juries must decide as they do in other damage cases. The Panel's conclusion is that a well-conducted CV study provides an adequately reliable benchmark to begin such arguments. It contains information that judges and juries will wish to use, in combination with other evidence, including the testimony of expert witnesses.

The Panel's second conclusion is that the appropriate federal agencies should begin to accumulate standard damage assessments for a range of oil spills, as described in Section V. That process should further improve the reliability of CV studies in damage assessment. It should thus contribute to increasing the accuracy and reducing the cost of subsequent damage assessment cases. In that sense, it can be regarded as an investment.

The proposals for further research outlined in Section V are an integral part of our recommendations. The Panel believes that the suggestions put forward there could lead to more reliable and less controversial damage assessment at reduced cost. It is not to be expected that controversy will disappear, however. There

will always be controversy where intangible losses have to be evaluated in monetary terms.