

COMMENT

Reply to the comments on “The devaluation of life”

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Bruce Carruthers (2009), Marion Fourcade (2009), and Lisa Robinson (2009) have offered a variety of insightful comments both on my article, “The Devaluation of Life” (Viscusi 2009a), and on the policy analysis procedure of attaching dollar values to reductions in fatality risks. Carruthers and Fourcade bring to bear a sociological perspective and question the moral integrity of the economic approach. Such a reservation commonly arises within regulatory agencies and for the public when the value of statistical life (VSL) methodology is not fully understood. While VSL methodology is now a mainstream economics research area and is in line with Robinson’s policy analysis prescriptions, she points out that government agencies share a responsibility to communicate to the public the rationale for the methodology and the reasons underlying changes in the VSL measures. Fundamental failures in communication may have contributed to the recent policy debacles involving the use of VSL figures.

The historical context of benefit–cost analysis provides a useful starting point for understanding why I advocate the policy application of the VSL measure despite the controversy surrounding these figures. Both Carruthers and Fourcade discuss the historical development of benefit–cost analysis, which was introduced as a policy evaluation tool within the context of public works projects. The Army Corps of Engineers and the US Department of the Interior’s Bureau of Reclamation have long assessed the economic benefits and costs of dams and related water resource projects and have used these estimates to justify the efforts, which are required by legislation to meet the test that a project’s benefits exceed the costs. Critiquing these economic assessments was my first published encounter with the cost–benefit methodology. In Berkman and Viscusi (1973), we concluded that many of the purported economic benefits calculated by the Bureau of Reclamation were overstated. But more importantly, we found that while the adverse ecological consequences of the dams were discussed in the policy assessments, those effects were subsequently easily ignored because no monetary value was attached to them. One lesson I derived from this experience is that monetizing difficult-to-quantify outcomes does not devalue them but rather makes it possible for such effects to be treated as just as real and consequential as more conventional economic effects.

Fourcade’s concern with the moral issues involved in valuing lives echoes the concerns formerly expressed by regulatory agencies. However, attempts to evade the intrinsic valuations of life that are implicit in the design of risk regulations have led to comparative neglect of lives in much the same way that adverse environmental consequences of dams

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were undervalued because they were not monetized. In its 1982 regulatory impact analysis for the proposed hazard communication regulation, the Occupational Safety and Health Administration concluded that it would be immoral to place a dollar value on the expected lives to be saved by the regulation. Instead, the agency assessed the benefits associated with the expected lives saved by the policy based on the "cost of death," which consisted of the present value of the deceased's future earnings and medical expenses.¹ After the US Office of Management and Budget rejected the regulation as generating more costs than benefits, I was asked to settle the inter-agency dispute and found that proper valuation of the expected lives saved – using the VSL – boosted these benefits by an order of magnitude, making the regulation attractive. Proper valuation of risks to life enhances their value and gives them greater weight in the policy assessment process.

One could of course choose to not place dollar values on risks to life at all and seek to adopt all risk reducing policies irrespective of cost. However, once costs begin to be recognized by policymakers as being consequential, we return to the economists' realm of tradeoffs and leave the idealized world of unconstrained life saving ventures. In Viscusi (1992) I provide a detailed documentation of why such tradeoffs are inevitable in the current regulatory landscape. Robinson's policy examples also make clear that the government routinely must make fundamental choices that impose limits on the amount spent on different regulatory policies because of the often immense price tags associated with these efforts. Given society's resource limitations, there will be some finite amount that can be allocated to lifesaving policies. The attractiveness of the VSL methodology is that it links the values assigned to risk reductions to the preferences of those protected by the policies rather than letting political administrations with different priorities set these values.

Two intriguing issues raised in the comment by Fourcade are the problem of squaring lives saved with money and the role of symbolism. These issues are inter-related, as they both pertain to economists' attempt to work in terms of tradeoffs between money and risks to life rather than making unqualified moral commitments to protect life. However, careful examination of this criticism suggests that the greatest problem may not be the economic methodology that is being used in this arena but rather that economists and government officials need to undertake a more effective communication effort along the lines advocated by Robinson.

Describing the methodology in terms of trading off dollars for lives, as Fourcade does, misrepresents what is entailed. The government policies for which the benefit values are used pertain to very small risks of death, such as lifetime fatality risk of 1/10,000 from decades of exposure to potentially dangerous chemicals. Because certain, identified lives are not being traded off for money, the terminology used in the literature has evolved from "value of life" to the "value of statistical life." This shift in nomenclature has occurred in an attempt to be more accurate, not to obscure the underlying moral issues.

Nevertheless, even if one recognizes that the tradeoff is between money and small risks of death, people may not be comfortable thinking in those terms. The numerous stated preference studies I have run have found that there is an underlying cognitive problem whenever people are asked to think in terms of tradeoffs involving quite different dimensions. For that reason, I have found it useful to ask people to value risks such as those from cancer or terrorist attack in terms of equivalent fatality risks in traffic accidents (Viscusi 2009b). People do, of course, make safety–money tradeoffs all the time. When buying a new car, there are typically other safer cars on the market or additional

safety options that can be added, but tank-like vehicles immune to risks from crashes do not dominate the market. Tradeoffs that are bundled as part of such consumer purchases may cause fewer challenges than asking people to conceptualize the tradeoffs as abstract attributes.

Given the difficulties people may have with recognizing the necessity of tradeoffs, it is often simpler and more powerful politically to resort to symbolism. It makes for much more compelling rhetoric for the US Department of Agriculture to declare that the agency will ensure that the nation's peanut butter supply is "safe" than to say that the regulatory efforts will lead to only nine expected deaths next year from contaminated peanut butter. Such uncompromising rhetoric with respect to commitments to safety has been incorporated by Congress in legislation, as the Clean Air Act prohibits the consideration of costs when setting ambient air quality standards and the Occupational Safety and Health Act requires that the agency provide safe and healthful working conditions. Such unqualified commitments to safety cannot be implemented as a basis for policy choice and ultimately must be tempered by affordability concerns, typically in a process hidden from public scrutiny.

Notwithstanding the uncompromising legislative constraints on air pollution regulations, in practice the affected policymakers do not work in a world of symbolism but rather in a world of financial limitations. Perhaps because of the inordinate costs of unlimited protections from air pollution, the US Environmental Protection Agency (EPA) Air Office has been at the center of the two controversies involving the devaluation of life – both the downward age adjustment for the elderly and the general lowering of the VSL originated in the context of air pollution regulations.

Although a similar devaluation of life occurred in the Clinton Administration without much fanfare, the two recent devaluations took on political overtones. Carruthers suggests that the general public was aware that lowering the VSL would reduce the stringency of regulations, and doing so appeared to be in line with the Bush Administration's broader economic agenda. While there is no evidence of any politically motivated effort to reduce the VSL by, for example, the US Office of Management and Budget, the public reaction and media coverage assumed that there was a political basis for the shifts. Thus, Robinson concludes that the EPA fell short with respect to communicating the reasons for the actions. My policy reform proposal goes further than communication in that it calls for a more credible process for selecting the VSL figures. In particular, agencies should convene the equivalent of the EPA Science Advisory Board to provide legitimacy to any major policy analysis shifts with respect to the VSL.

Even with such a process change, government decisions may not be ideal. As Carruthers points out, government policymakers may be subject to irrationalities as well.² The role of such cognitive failures is a principal theme of Viscusi (1998) in which I document the institutionalization of such shortcomings in government policies. Congress and government agencies are subject to political pressures from the citizenry where these citizen interests may result in part from the public's irrational fears and cognitive limitations when dealing with risk. The result is that there are often imbalances in regulatory efforts that produce policies which fall short of what could be achieved from the standpoint of overall societal welfare. The Food and Drug Administration imposes strict regulations on artificial chemicals and has much more lax standards for naturally occurring carcinogens. The EPA targets its hazardous waste cleanup efforts based on the congressional district's political clout, as sites with high voter turnout rates and with

representatives on key congressional committees are given priority. The result is that preference is given to the cleanup of sites that pose no current risk, and there is neglect of sites that pose hazards to current populations who tend to be less affluent and less politically connected.

Symbolic, unbounded policy commitments also may come at a cost. Paying any price that is necessary to ensure safety may be effective rhetoric, but in practice may harm safety even if health is all that we value. The problem is that regulations divert funds that could have been profitably spent elsewhere. Based on a VSL figure of \$7 million, I have shown that once expenditures on safety exceed \$70 million per expected life saved these expenditures will cost more lives than they will save.³ The reason for such a counterproductive effect is that such expenditures take money from consumers that could have otherwise been spent on health care, better nutrition, a lower crime neighborhood, medical care, or a safer car. Excessive expenditures on safety may have symbolic value but on balance will harm the public health. Squandering funds on ineffective symbolic regulations that often cost more than \$100 million per expected life saved is not simply a matter of opportunity costs in terms of foregone desirable consumption decisions. Such profligacy imposes a real, but often unrecognized threat to public health.

While benefit–cost analysis and use of VSL figures cannot eliminate all policy imbalances, these tools serve to ground government agencies by establishing a policy assessment approach that addresses the actual risks that are present using a methodology that recognizes the pertinent tradeoffs.

Notes

- 1 The details of the analysis are presented in Viscusi (1992).
- 2 The role of cognitive failures is a principal theme of the comment by Fourcade (2009). A wide range of these failures are reviewed by Heimer (1988).
- 3 In Viscusi (1998) I provide a review of this risk–risk analysis approach.

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