

2006

How Much is that Doggy in the Window? The Inevitably Unsatisfying Duty to Monetize

Adam F. Scales

Follow this and additional works at: <https://ir.lawnet.fordham.edu/ulj>



Part of the [Law and Economics Commons](#)

Recommended Citation

Adam F. Scales, *How Much is that Doggy in the Window? The Inevitably Unsatisfying Duty to Monetize*, 33 Fordham Urb. L.J. 1045 (2006).

Available at: <https://ir.lawnet.fordham.edu/ulj/vol33/iss4/3>

This Article is brought to you for free and open access by FLASH: The Fordham Law Archive of Scholarship and History. It has been accepted for inclusion in Fordham Urban Law Journal by an authorized editor of FLASH: The Fordham Law Archive of Scholarship and History. For more information, please contact tmelnick@law.fordham.edu.

HOW MUCH IS THAT DOGGY IN THE WINDOW? THE INEVITABLY UNSATISFYING DUTY TO MONETIZE

*Adam F. Scales**

Einstein appears in front of a blackboard. Before him is an impenetrable string of equations, ending, improbably, with a dollar sign. The caption reads, “Einstein discovers that time is actually money.”¹

INTRODUCTION

It is impossible to imagine effective teaching or scholarship across a range of disciplines within the legal academy without some reference to economics. Impossible today, that is. Generations of students and professors did serviceably well before the ongoing transformation of the law school into a thoroughgoing academic discipline. Economic analysis most influentially embodies that ambition. Refracting legal and administrative decision-making through the lens of quantified risks and benefits is not simply desirable, it is inevitable. Indeed, a central descriptive claim of law and economics is that efficiency and social welfare concerns have always animated legal processes. The descriptive and normative claims of law and economics are, of course, open to debate. What is assuredly true is that students of the law—regardless of which side of the podium they find themselves—must at some point consider the material constraints on policy.

I have been asked to respond to Professor Kip Viscusi’s contribution to this Symposium, “Monetizing the Benefits of Risk and Environmental Regulation.”² Professor Viscusi is the leading proponent of cost-benefit

* Associate Professor of Law, Washington and Lee University. I am grateful to the Journal for inviting me to contribute to this Symposium. Peter Siegelman, Jeff Lubbers, Richard Parker, and Kurt Strasser all provided invaluable comments, though this should not be held against them. Finally, I am grateful to Professor Viscusi, whose provocative research has stimulated in me both unexpected disagreement, and an eagerness for further inquiry.

1. GARY LARSON, *THE FAR SIDE GALLERY* 2, 33 (2003).

2. W. Kip Viscusi, *Monetizing the Benefits of Risk and Environmental Regulation*, 33 *FORDHAM URB. L.J.* XX (2006) [hereinafter Viscusi, *Monetizing the Benefits*].

analysis as it applies to regulation. He is an astonishingly prolific scholar, and his work has been as influential within the academy as it has in the field.

As a commenter, I am thus fortunate that this piece breaks no new ground, but instead reviews the theory and application of cost-benefit analysis. The range of scholarship on the topic is vast and often technical; Professor Viscusi is the rare scholar who can cite extensively to his own work without appearing immodest. That is of immense value to the commenter, as it helps him trace for the reader the context of Viscusi's work and some of the increasingly formal critical responses thereto.

Cost-Benefit Analysis

Learned Hand would no doubt be pleased to see the remarkable sweep of the formula that bears his name.³ Unchained from the colorful—if epistemologically inapposite—facts of *Carroll Towing*,⁴ cost-benefit analysis now occupies a central role in administrative regulation. Viscusi describes the relatively recent promulgation by the United States Office of Management and Budget (OMB) of standards to guide federal agencies as they consider very explicit tradeoffs among health outcomes, direct compliance costs, and the diverse outputs of regulation.⁵ These considerations are essential to enable policymakers to make rational and consistent risk decisions across different policy domains.⁶ It is important to know that, for example, Regulation X leaves society better off if enacted. Somewhat less obviously, we ought to prefer Regulation Y to Regulation X if Y leaves us even better off. In a world of constrained regulatory

3. *United States v. Carroll Towing Co.*, 159 F.2d. 169 (2d Cir. 1947). Hand's rule for negligence, simply stated, holds that when P is the probability of an event, L the amount of loss resulting from that event, and B the burden on the defendant to prevent the event from occurring, negligence results where $B < P(L)$. *Id.* at 173.

4. See Stephen G. Gilles, *U.S. v. Carroll Towing Co.: The Hand Formula's Home Port*, in *TORTS STORIES* (Robert L. Rabin & Stephen D. Sugarman eds., 2003).

5. Viscusi, *Monetizing the Benefits*, *supra* note 2, at XX.

6. One might distinguish the need for consistency across the spectrum of regulatory risk choices from those made by individuals. Viscusi offers intriguing data suggesting a great deal of correlation between different types of individual risk choices not obviously related to one another. For example, he presents data showing that smokers are ten percent less likely to wear seatbelts and twice as likely to suffer an accident at home. Nor do they floss as often as nonsmokers. *Id.* at XX. This implies that there is some underlying taste for risk that expresses itself across different choices. But this does not entail that individuals consistently express these tastes, even though risk tendencies can be observed at the level of populations. The upshot for Viscusi's analysis is this: perhaps it is desirable to determine regulatory policy based on consistent risk preferences. But this ought not to be confused with an observation that, in fact, individuals do so (with the implication that risk-consistent regulatory policies merely instantiate that preference).

possibilities, some mechanism is needed to sort out the good ideas from the bad, as well as the better ideas from the merely good.

Cost-benefit analysis (“CBA”) offers such a mechanism. But because “costs” are initially denominated in dollars and “benefits” typically do not self-denominate accordingly, direct comparisons are difficult. Instead, researchers have derived estimates of dollar values from observed market behavior and survey data. Human health and safety are sometimes directly traded (as in the provision of health care or shelter). More often than not, however, we can only observe transactions in which health and safety considerations are merely implicit. Statistical tools are employed to tease out the component of the transaction (say a wage premium) that is thought to be attributable to risk. Thus armed with the “market rate” for a quantum and type of health risk, one can infer what an actual market would look like for a spectrum of risk portfolios.

These market estimates may be supplemented with survey data. Contingent valuation is a process wherein participants are asked to behave like market actors where they may transact for health and safety-denominated goods. A famous example is the fascinating if unwieldy finding that shoppers in Greensboro, North Carolina state a willingness to pay \$883,000 to avoid a lifetime of chronic bronchitis.⁷

These observations reach fruition with the concept of VSL, or “value of a statistical life.” As the name implies, and Viscusi is careful to note, the term describes a sum of money, which for regulatory purposes may be regarded as equivalent to society’s willingness to pay to avoid the loss of a human life.⁸ VSL is a thought experiment that assigns a monetary value to the benefits of regulatory choices—an experiment that is itself derived from the natural and artificial experiments sketched above. VSL methodology has been in use for decades, though it has seen increasing refinement (and a dramatic rise in inferred values) since the late 1980s.

There is much to commend the VSL concept. Every torts teacher walks his class through a series of hypothetical scenarios involving road safety or some other good, and asks some lucky student how much we should spend to make cars safer. Every year, someone resists, drawn by some innominate and inarticulate sense that such comparisons are simply wrong. After a few laps around the rhetoric of risk reduction, the now-unfortunate student confesses that, yes, it doesn’t make sense to spend \$4 trillion to save an inattentive driver’s life, but, no—making such tradeoffs

7. FRANK ACKERMAN & LISA HEINZERLING, PRICELESS: ON KNOWING THE PRICE OF EVERYTHING, AND THE VALUE OF NOTHING 96 (2005).

8. Viscusi, *Monetizing the Benefits*, *supra* note 2, at ___.

is still wrong.

There are actually more sophisticated arguments, from a variety of perspectives on this score,⁹ but at the end of the day we must decide whether to spend X dollars (rather than X-n, or X+n), on safety. We deserve to know what we're getting for our money. The regulatory bureaucracy has largely embraced VSL, and Viscusi and others deserve credit for insisting on the use of economic tools in making decisions with economic consequences.¹⁰

Moreover, while the range of VSLs computed (and, somewhat discouragingly, actually used) varies significantly (between \$1 million and \$30 million), it is interesting to note, as Viscusi observes, that there is significant clustering of estimates.¹¹ In other words, the methodologies commonly employed do not derive values of \$50,000 for one domain, and \$3 billion for another. This suggests that VSL methodology is in fact measuring something with modest consistency.

I think it appropriate to emphasize those important qualifiers: "something" and "modest." The CBA project is an impressive, ongoing technical achievement. If one believes the task of economics is to illuminate the costs of social choices, as I do, Professor Viscusi has done much to illuminate the costs of regulation. The state of the art is such, he argues, that relatively minor disputes about methodology should not obscure the necessity and benefit of CBA.¹² But I believe the reach of this science has exceeded its present grasp; as a "back of the envelope" admirer of law and economics, I am in the uncomfortable position of finding that admiration somewhat dulled by my inquiries here.

Willingness To Pay

Let us consider first the willingness-to-pay measure ("WTP"). From market transactions and surveys, Viscusi and others have derived estimates of how much people would pay to avoid small risks of death; these sums

9. See, e.g., MARGARET RADIN, *CONTESTED COMMODITIES* (1996); Heidi Li Feldman, *Harm and Money: Against the Insurance Theory of Compensation*, 75 TEX. L. REV. 1567 (1997).

10. Richard Parker and others observe that CBA analyses lend themselves to the view that there exists a finite regulatory budget. See Richard W. Parker, *Grading the Government*, 70 U. CHI. L. REV. 1345, 1345-75 (2003). This is literally untrue. However, the practical constraints on health and safety expenditure mean that we are very unlikely to undertake all regulations equally; some ranking is required, and that will inevitably involve cost-benefit calculations.

11. Viscusi, *Monetizing the Benefits*, *supra* note 2, at ___.

12. *Id.* at XX-XX (stressing the importance of cost-benefit analysis and the successful use of various methodologies to measure it).

may be scaled up to reflect what people ought to be willing to pay to avoid certain death—for *someone*.¹³ I add that term because presumably, any individual would spend all of his wealth to avoid certain death.¹⁴ The disutility function of death risks (and the concomitant WTP) are non-linear. The first problem is the selection of WTP measures.

WTP is attractive because most transactions are made for the benefit of the transacting parties, not others. Viscusi's theory is that our collective willingness to pay (for safety regulation) ought to reflect the average WTP.¹⁵ I have no doubt that this is an attractive view among economists, but I think it fundamentally misperceives regulatory wealth transfers. A health regulation can be evaluated under WTP, or "willingness to accept" ("WTA"). Viscusi observes that in experimental contexts, observed WTA values are significantly higher than WTP.¹⁶ There is every reason to think that this value is closer to what citizens expect of their government because most regulation is inherently other-regarding. The real question—or at least one likely to lead to very different valuations—is the willingness to impose risks on others. I call this "willingness to impose" ("WTI")—and Professor Viscusi can correct me if there is a more precise term extant. A regulatory scheme that elevates WTP-derived measures over others suffers from two deficiencies: first, it is biased in favor of market-based data, because most WTP measures are derived therefrom. If, therefore, market-based data is systematically biased in one direction or another, WTP-based regulatory measures will suffer corresponding error. Secondly, it overlooks the panoply of considerations, not captured by market observations, which people probably entertain when exercising regulatory power over others.

Imagine a homeowner who purchases a home for \$100,000. What is the value to her? Well, it must be something more than \$100,000—otherwise the transaction would not be worthwhile. Still, her WTP is not likely to significantly exceed \$100,000. Once she takes possession, it becomes very unlikely that her willingness to accept would not significantly exceed \$100,000. Which is the correct figure? Both are useful. It is natural to think that individual WTP should be mirrored in collective WTP for regulatory action, but I do not believe that most people actually think about it this way. Consider the near-universal condemnation of *Kelo v. City of New London*.¹⁷ Legislatures have introduced bills to restrict state power to

13. *Id.* at XX.

14. Viscusi implies a wealth constraint, but I am not so sure. *See Id.* at XX; *cf. infra* note 16 and accompanying text.

15. Viscusi, *Monetizing the Benefits*, *supra* note 2, at XX.

16. *Id.* at XX.

17. 125 S. Ct. 2655 (2005).

take property for private use.¹⁸ The opinion's author even concedes that the outcome was unwise.¹⁹ What explains this reaction? I suspect part of the problem is the mismatch between WTA and WTP in such cases.

It is worth noting that Viscusi's cited literature does in fact support this intuition, though he does not emphasize it. When respondents are asked to attach WTP values for risks to be borne by others (altruism), the values thereof are reliably several times higher than self-regarding WTP.²⁰ I do not understand why, in a regulatory context, self-regarding measures should be given analytical priority. Virtually all regulation is other-regarding: for example, I am to pay (let us assume through taxation) a sum certain to eliminate a one-in-100,000 risk of death. The risk to me personally is trivial. The risk to one of my fellow citizens is all but certain—I simply cannot identify him in advance. Assuming my complete willingness to monetize risk-life tradeoffs, the regulatory deal I am being offered is to trade a sum certain to save someone else's life. Viscusi would be very correct to point out that my WTP is unlikely to be limitless. But a modest amount of empathy may reveal a true preference for enhancing other-regarding welfare in ways not captured by my personal spending habits. It is for this reason that I feel comfortable predicting that most people would support an enhancement or "lodestar" approach to compensating homeowners who lose their homes to eminent domain.

Note that something more than altruism is at work here. I use the term WTI to illustrate that some regulatory choices²¹ reflect conscious decisions to transfer resources from private to public hands. Those resources could be physical property, unliquidated damage claims, or health status. I am personally very skeptical of government power, so I assume that people on whom it is necessarily inflicted for the greater good take unique umbrage. Specifically, the claims one may validly make upon the market are very different than those one may make as a citizen. Unreconstructed WTP measures do not reflect this, and the mysteriously underemphasized "altruism" enhancement may only partially describe the reluctance people have in visiting unelected risks upon others through government.

18. See, e.g., S.F. 2750, 109th.Cong. (2006).

19. *Kelo*, 126 U.S. at 2668; see also Linda Greenhouse, *Supreme Court Memo: Justice Weighs Desire v. Duty (Duty Prevails)*, N.Y. TIMES, Aug. 25, 2005, at A1.

20. See, e.g., W. Kip Viscusi, *The Value of Risks to Life and Health*, 31 J. ECON. LITERATURE 1912, 1940 (1993).

21. I refer here to direct regulatory outlays, such as the decision to commit resources to cleaning up a polluted stream, rather than regulation that requires private actors to pay. As Viscusi notes in a different context, drawing this distinction permits us properly to consider different VSLs (and thus necessarily different WTPs). See *infra* notes 30 and 31 and accompanying text.

VSL analysis does not deal easily with entitlements that people do not consistently express across time, different wealth states, or market and non-market domains. There is, of course, a great deal of literature on this topic, and I am skeptical whether measures emphasized by Viscusi adequately account for its insights. If so, then his analysis will systematically undervalue the benefits of regulatory action (or, expressed another way, undervalue the costs of health risk transfers).

Viscusi points out a number of improvements that robust CBA analysis provides over prior metrics.²² For one thing, it offers a syntax for describing benefits (such as visibility due to improved air quality) that simply could not be expressed with commensurable precision otherwise.²³ Moreover, WTP measures, in theory, are better suited for capturing losses for death or pain that the tort system, with frustrating formality, insists on characterizing in strictly pecuniary terms (i.e., most states nominally permit wrongful death damages to account for loss of income, not an abstract value for loss of life).²⁴

Nonetheless, the economic analyses Viscusi describes often insert assumptions that “flatten” or smooth out what will in reality tend to be rather lumpy distributions. For example, in describing a hypothetical chemical regulation, he states that the relevant benefit outcome against which costs are to be measured is the mean value of the distribution based on the dose-response relationship.²⁵ This is plausible, but relies heavily on a measure of risk indifference that exists only in economic models. As Viscusi correctly notes, individuals’ responses to deaths or injuries are not uniform; they may have a particular fear of cancer, or of disfigurement.²⁶ This may cause them to assign outsized values to particular risks. Viscusi recognizes this limitation, but only as a source of possible error in regulatory decisions. He does not assign it independent weight as a data point that might be used to shape the “correct” regulatory response. This is a rather thin conception of regulatory rationality, to which I shall return later.

Calculating VSLs

Viscusi provides a revealing example for using VSL. He imagines, similarly to my example above, a one-in-100,000 risk of death that can be

22. Viscusi, *Monetizing the Benefits*, *supra* note 2, at ___.

23. *Id.* at ___.

24. *Id.* at ___.

25. *Id.* at ___.

26. *Id.* at ___.

eliminated.²⁷ The question is, “how much would you pay” to do so? If the answer is \$70, then there is an implied VSL of \$7 million.²⁸ The first item of note is the strong appeal to insurance analogy. The problem is that insurance behavior rarely looks anything like this. People exhibit all kinds of irrational preferences, under-insuring relative to the expected value of their earnings (including this author, a professor of insurance law), and over-insuring relative to the likelihood of certain, highly-salient risks (such as accidents).²⁹ This poses a fundamental problem for VSL methodology because life insurance is about as close a transaction as it is possible to find in which individuals self-valuate. If the reasonably transparent life insurance market is an extremely unreliable indicator of life values, it is not clear why esoteric decisions regarding seat belts, smoking, or implicit wage premia would be better.

Another point is subtle. Viscusi observes that, as we are dealing with small risks of death in most regulatory actions, the VSL implied by the above hypothetical need not be constrained by the present value of the individual’s wealth.³⁰ He then links this observation with the recognition that the implied VSL would be “different” for much greater risks.³¹ Different, indeed; the VSL would be astronomically higher. For example, I am an unusually risk-averse person. My students always make fun of my grandmotherly driving habits. But I suppose I would be willing to play Regulatory Roulette: for \$100,000 I am willing to sell the right to expose myself to a one-in-100 risk of immediate death. But for a five percent chance, I would not take less than \$1 million. And it only goes up from there.

Viscusi has acknowledged previously that the heterogeneity of risk preferences limits the generalizability of implied VSLs.³² But this is also the case—perhaps dramatically so—with risk-variant VSLs. But Viscusi does not suggest, nor do the regulatory examples he cites imply, that the VSL used in evaluating regulations imposing one-in-100,000 risks are adjusted upwards when one-in-10,000 risks are under consideration. Putting these two ideas together, it is clear just how much “smoothing” is required by Viscusi’s model: not only is the amount of risk preference

27. *Id.* at ___.

28. *Id.* at ___.

29. See generally Kyle Logue, *The Current Life Insurance Crisis: How the Law Should Respond*, 32 CUMB. L. REV. 1 (2002); Adam F. Scales, *Man, God and the Serbonian Bog: The Evolution of Accidental Death Insurance*, 86 IOWA L. REV. 173 (2000).

30. Viscusi, *Monetizing the Benefits*, *supra* note 2, at ___.

31. *Id.*

32. *Id.* at XX.

certain to be wrong for almost everyone (though correct for that hardy staple of economic thought, the average person), but the VSL would be correct for him only with respect to—at best—the *average risk-imposing regulation*. And even this modest illumination depends critically on the accuracy of stated preference and implied risk premium calculations, and the robustness with which they can describe varying levels of risk.

I offer a final observation regarding this example. While a perfectly-functioning explicit market for risk would likely constrain an individual's risk-eliminating purchasing power to something like the present value of his wealth, there is no reason to suppose this constraint applies equally to all implicit political markets in risk. All government activity is redistributive; the question is simply the opacity with which the redistribution takes place. VSL methodology seeks a kind of “soft” internalization of regulatory costs among risk-affected populations. I find this personally appealing, but that is largely because I find redistribution generally unappealing. But that is not how political processes work, and most people would not agree with my Paleolithic views. If this is so, then we must ask whether markets are truly revealing collective preferences.³³

Moreover, limiting the VSL to “owned” wealth ignores the diverse sources of wealth individuals may call upon under exigency: family, public appeals to charity, and of course direct government intervention. As many of these are in fact observable—a point I develop later—I am puzzled as to why these sources should not be included in the WTP calculus.

Bronchitis and Potato Chips

When I was in law school, I had the privilege of being a research assistant for a distinguished scholar I will not impugn by association here. He asked me to research the then-emerging field of contingent valuation methodology (“CVM”). I found that the state of the art was well-described by a cheeky law review title, “Ask a Silly Question . . .”.³⁴

Professor Viscusi and others have elaborated considerably on the simple methods then available to probe preferences that cannot be naturally observed. Their refinements can be seen in the indirectness with which valuation questions are posed, and the use of iterative choices to “close” the expressed preferences of research subjects. Moreover, some of the early inconsistencies described in the CVM literature (apparent indifference to

33. See *infra* note 67 and accompanying text for a discussion of “collective” decision-making versus aggregated individual decisions.

34. Note, “Ask A Silly Question . . .”: *Contingent Valuation of Natural Resource Damages*, 105 HARV. L. REV. 1981 (1992) [hereinafter *Ask a Silly Question*].

the numbers of species saved per unit of cost) have been overcome to the point that a surface plausibility emerges. For example, in a study Viscusi co-authored several years ago, respondents considered risks of treatable and non-treatable diseases and accidents.³⁵ Unsurprisingly, people treat the disutility of terminal cancer and a fatal crash very similarly.³⁶ Cleverly, Viscusi corroborated these putative preferences by generating survey data tied to the physical consequences (not simply the names) of the diseases.³⁷ The correlation is strong, indicating that people are being relatively consistent in their responses.

I find this work elegant and fascinating. The mathematics are cunningly worked out, and as someone who studies the allocation of injury and disease costs, I cannot help but be inspired to develop the empirical chops necessarily to explore such findings more fully. The problem is, I can't get the ATMs out of my mind.

I refer to the computerized testing machines that researchers have wisely substituted for human interrogators in these surveys.³⁸ Respondents answer questions appearing before them on a computer monitor. We are thus deriving our estimates of the value of human life from bored shoppers in a North Carolina mall who ponder the price of avoiding chronic bronchitis in between slurps of Orange Julius. I would not expect these people to be able to correctly identify the Chairman of the Federal Reserve, the approximate size of the federal budget, or their own Congressman. *If* they could define "MRI," I would be astounded if they knew its approximate cost (many doctors did not as late as fifteen years ago). They certainly would misstate the relative likelihood of sustaining a head injury in car collisions across different models, are still unsure how to operate ABS, and would be floored to discover that only 4.2 percent of deaths result from accident.

Why on earth would we care to hear their opinions about how much they might accept in return for chronic bronchitis—a sum not one in a thousand has ever seen? In what way does their apparent expertise in selecting detergent and potato chips for national marketing qualify them to determine the regulatory policy of the Environmental Protection Agency? Asking someone how much she might pay to avoid a disease so far outside of common experience that the researcher must take pains to educate her in

35. Wesley Magat et al., *A Reference Lottery Metric for Valuing Health*, 42 MGMT. SCI. 1118, 1119 (1996).

36. *Id.* at 1123.

37. *Id.*

38. *Id.* at 1122.

advance³⁹ is not simply a silly question; it is a wholly fantastical question.⁴⁰

At this point, I have a perhaps-silly question of my own. Do CBA proponents have the same confidence in civil juries?⁴¹ My inquiries have only scratched the surface of Professor Viscusi's work. I am hesitant—more so I suspect than Professors Heinzerling and Ackerman⁴²—to impute to it the broadly deregulatory agenda with which some CBA enthusiasts are, interestingly enough, also allied. Therefore, let me address the question to myself. I am gravely skeptical of the competence of juries to assess even modestly complex risk-relevant information. The misleadingly one-dimensional character of tort litigation systematically biases jurors to elevate presently materialized risks over those external to the case at hand. The limited (and adversarial) guidance given to jurors when they assess compensation would be unthinkable in nearly any other public decision-making context. Certainly, there are matters of reasonableness I would sooner entrust to the first twelve people I could find in Central Park, rather than the elite and entirely unrepresentative and impractical professoriate I know so well. But just as I would not trust those twelve people to recommend medication to me or deliver a baby, I see little reason to imagine they are competent to evaluate the physician who does, particularly in view of the systematic ways civil trials inhibit the rational processing of information.⁴³

Next to the survey methods on which Professor Viscusi lays such emphasis, the civil jury trial is practically a contemporary policy seminar! Nor am I impressed with the observed “stability” of iterative choice methods he describes.⁴⁴ Twenty-five or more jury verdicts are highly likely to yield an accurate assessment of Merck's average liability for Vioxx cases. Like the surveys, this is an interesting number, and it can be put to some use. But for all we know, the juries merely express the same cognitive limitations iteration after iteration; consistency must not be mistaken for external truth.

39. *Id.* at 1121.

40. It would be equally informative (and perhaps more entertaining) to drop this author onto the set of “Who Wants to Be a Millionaire?” and ask him to differentiate between logit, probit and Tobit, which numerate readers will quickly recognize as the kind of linear regression models econometricians such as Viscusi commonly employ.

41. Evidently not. See, e.g., W. Kip Viscusi, *Jurors, Judges, and the Mistreatment of Risk by the Courts*, 30 J. LEGAL STUD. 107 (2001) [hereinafter Viscusi, *Jurors, Judges*].

42. ACKERMAN & HEINZERLING, *supra* note 7, at 56-59.

43. Viscusi, *Jurors, Judges*, *supra* note 41, at 135.

44. See, e.g., Viscusi, *Monetizing the Benefits*, *supra* note 2, at ___.

Wage Differentials

Although the method sketched above is employed to fill in certain valuation gaps, Viscusi is careful to note that they are not actual decisions.⁴⁵ The true test of individuals' values for risk comes from market data. Workers will be compensated for risky work, and consumers will pay less for risky products (expressed here as a premium for safe products). Summarizing his recent meta-analysis of wage-risk differential data from dozens of studies, Viscusi derives a median VSL of \$6.7 million (adjusted to \$7.1 million for inflation).⁴⁶ Looking at a number of products-related surveys, VSLs are also clustered around \$4-5 million, across a spectrum of purchase decisions.⁴⁷

It is indeed interesting to note the general consistency of these valuations. This consistency matches neatly with the theoretical prediction that rational actors with a certain and stable taste for risk should act consistently with that taste across their various activities. Perhaps too neatly. I certainly find the theory plausible, and would have assumed (subject to qualification) that it was likely to be borne out by examination.

In preparation for receiving Professor Viscusi's paper, I read up on VSLs. I read *Priceless*,⁴⁸ and other works from different schools of thought within labor economics.⁴⁹ One fact leapt out at me: the observed risk premia were astonishingly small. Ackerman and Heinzerling reported typical premia of thirty cents per hour, rising to about one dollar per hour for the handful of riskiest jobs.⁵⁰ Two thousand dollars a year? I must confess my surprise. Perhaps I was imagining high value-added jobs (putting out oil fires) when I should have been thinking about convenience store employees. Sure enough, Viscusi describes a hypothetical typical worker exposed to a one-in-25,000 risk who receives an implied premium of \$268 annually.⁵¹

From an actuarial standpoint, the math works out fine. But my immediate intuition was one of skepticism: what is the signal (risk premium) to noise (myriad factors determining compensation) ratio here?

45. *Id.* at ___.

46. *Id.* at ___.

47. *Id.* at ___.

48. ACKERMAN & HEINZERLING, *supra* note 7.

49. *See, e.g.*, Peter Dorman & Paul Hagstrom, *Wage Compensation for Dangerous Work Revisited*, 52 INDUS. & LAB. REL. REV. 116 (1998); Morley Gunderson & Douglass Hyatt, *Workplace Risks and Wages: Canadian Evidence From Alternative Models*, 34 CANADIAN J. ECON. 377 (2001).

50. ACKERMAN & HEINZERLING, *supra* note 7, at 80.

51. Viscusi, *Monetizing the Benefits*, *supra* note 2, at ___.

An amount of \$268 is less than one percent of the average annual wage in the United States.⁵² Assuming that a risk premium is an innate component of compensation, I wonder about how reliably we can ascertain it.

Let me emphasize my relative unfamiliarity with labor economics and statistics. Viscusi has surely forgotten more than I am likely to learn. Yet, I cannot help but notice that many of these studies draw from diverse data sets compiled at different times for different purposes. Each has its own set of assumptions, limitations and “patches.” This is not unique to labor economics, but is a fundamental challenge throughout social science; one can almost never observe *everything* with consistency. It is common for such studies to rely in part on datasets that are twenty years old. I do not see how simply adjusting for inflation could possibly yield accurate values, across many dimensions, for today’s workforce. That problem is only compounded when one considers the long-tail nature of regulatory decisions. The best snapshot of the world today will be used to guide risk decisions impacting people twenty years from now.

There is no obviously correct solution to this problem, and paralysis by analysis is uniquely unattractive. But certainly we must proceed with great caution before setting too much store beside our already-outdated calculations. One need only observe the profound changes in VSL methodology and results Viscusi describes as having occurred in a relatively short time to confirm this.⁵³

These cautionary notes would ring true in a world of perfectly competitive labor markets. Labor markets, however, are not perfectly competitive. A number of scholars have reported that minorities, women, and other disadvantaged workers are less likely to command wage premia commensurate with risky work.⁵⁴ Viscusi reports also that smokers are more likely to be injured, controlling for job risk, and has elsewhere

52. Social Security Online, Average Wage Index (AWI), available at <http://www.ssa.gov/OACT/COLA/awidevelop.html> (last visited Apr. 6, 2006).

53. Viscusi says that VSLs have been stable for some time. Viscusi, *Monetizing the Benefits*, *supra* note 2, at ___. But I believe he must be referring to research done over the past twenty years or so.

54. See, e.g., Joni Hersch, *Compensating Differentials for Gender-Specific Job Injury Risks*, 88 AM. ECON. REV. 598 (1998); W. Kip Viscusi, *Racial Difference in Labor Market Values of a Statistical Life*, 27 J. RISK & UNCERTAINTY 239 (2003). Hersch (and Viscusi) do note the presence of compensating differentials for women, but Hersch’s data imply a lower VSL for women; it is likely that either the data are insufficiently resolved to point to the correct VSL (which I believe may be Hersch’s interpretation, see Hersch, *supra*, at 607), or women workers may simply be “unlucky,” in Dorman and Hagstrom’s terms. See Dorman & Hagstrom, *supra* note 49, at 133. The strong hand of noncompetitive factors in determining wage-risk tradeoffs counsels caution in extrapolating regulatory policy from voluminous, yet misleading, data.

adduced data that smokers require smaller wage-risk premia.⁵⁵ Again, this points towards the conclusion that wage-risk measures capture some underlying preference for risk. But, unless workers express this preference consistently (within the heterogeneous domains different workers inhabit), it is unclear how this observation should be translated into regulatory policy, except in a general way. This is a perennial problem with VSL methodology: one is required to have robust confidence in the observable expression of risk preferences and the ability to scale those preferences up to a regulated domain that may involve different or unobservable risk preferences. The many caveats that appear throughout the underlying VSL literature are not in my view consistent with such confidence.

The sex- and race-related data illustrate this problem of extrapolation. Heinzerling and Ackerman suggest that not only are women less likely to command wage premia (presumably because of discrimination),⁵⁶ but are significantly more risk averse—perhaps six or seven times more so than men.⁵⁷ Most risky jobs are held by men. Ought not the VSL for regulatory purposes be adjusted upwards? After all, environmental health regulation affects everybody, not just men. If women really are six times more risk averse than men (at least with respect to environmental hazards), then the population-level VSL should be approximately three times higher.

Viscusi himself recognizes that VSLs for regulatory purposes might appropriately vary depending on the character of the regulation.⁵⁸ Using his example of airline safety versus road safety,⁵⁹ I would generalize as follows: where the regulation supplements a market transaction, the regulation should reflect, as best as we can determine, the expressed VSL of the affected population.⁶⁰ Therefore, if we really *knew* that workers

55. Joni Hersch & W. Kip Viscusi, *Cigarette Smoking, Seatbelt Use, and Differences in Wage-Risk Tradeoffs*, 15 J. HUM. RESOURCES 202 (1990).

56. ACKERMAN & HEINZERLING, *supra* note 7, at 78. Viscusi, relying on Hersch, replies that women do in fact command wage-risk premia. Viscusi, *Monetizing the Benefits*, *supra* note 2, at XX. But I do not read Hersch to assert that these premia are commensurate with higher levels of risk aversion.

57. Viscusi, *Monetizing the Benefits*, *supra* note 2, at __.

58. *Id.* at XX.

59. *Id.* at XX. Viscusi suggests that the higher incomes of airline passengers should determine higher regulated investments in airline safety—and perhaps higher than what should be imposed on members of the general population (whose lower income implies a lower VSL). *Id.*

60. My generalization is incomplete; at some point, the transaction costs of an imagined private transaction are so high, it is no longer sensible to speak of the “market” at work at all. For example, perhaps it is plausible to assume that residents in a factory town are capable of reaching some arrangement as to pollution-employment tradeoffs that reasonably reflect their preferences. However, if the affected population is dispersed over hundreds of miles from a pollution source, it is perhaps better to regard regulation not as a response to an

valued their lives at \$7.1 million, that figure is an appropriate basis for filling the “gaps” in worker safety measures privately agreed. On the other hand, if we are funding health measures from a public regulatory budget for general benefit, we will necessarily consider a more diverse set of risk preferences (along with the WTI and WTA considerations described earlier). Given this concession, should we confine VSLs derived from wage-risk studies to the task of workplace regulation (of risk-preferring white guys)? Actually, there may be unexpected wisdom there. Workers with the highest VSLs may represent the heterogeneity of risk preference (as I believe Viscusi would argue), or may represent the furthest plausible range of life valuations derivable from market studies. Why should not that highest expressed value, rather than average VSL, be used for regulatory decisions, at least for “public” or “market-forcing” regulations?

Product Safety and Heroic Interventions

With regard to products-based risk-differentials, my perspective is constrained by years of studying and teaching products liability. That experience has confirmed that the average person knows almost nothing about product safety. Professor Viscusi provides only a brief resume of WTP measures derived from seatbelt usage decisions and purchases of new cars.⁶¹ I have looked only at some of this data. Calculating a VSL based on the fraction of work-opportunity cost expended by putting on a seatbelt is facetious.⁶² Moreover, I happen to be a car fanatic, and follow the auto market with some care. I cannot accept as plausible the suggestion that rising car prices reflect rising safety levels.⁶³ How do competitive market models for risk account for the fact that, until quite recently, manufacturers were pulling down a profit of \$15,000 on their larger SUVs despite the fact that they are not safer than mid- or full-sized cars, as many people imagine?⁶⁴ There is so much “noise” in the automotive purchase decision that I cannot believe it resolves VSLs with the superfine granularity Professor Viscusi discerns.

One of the interesting questions Viscusi raises is whether VSL

imperfectly-executed transaction, but rather as a substitute for a failed one.

61. W. Kip Viscusi & Joseph Aldy, *The Value of A Statistical Life: A Critical Review of Market Estimates Throughout the World*, 27 J. RISK & UNCERTAINTY 5, 25-26 (2003).

62. Viscusi, *Monetizing the Benefits*, *supra* note 2, at XX (referring to Viscusi & Aldy’s literature review cited *supra*, note 61, at 24).

63. Certainly, this is true in the Yugo and Daewoo stratum, but many luxury cars have lower crash test scores than family sedans.

64. See Michelene Maynard, *Trading the Hummer for a Honda*, N.Y. TIMES, Mar. 18, 2006, at C1; NAT’L HIGHWAY TRAFFIC & SAFETY ADMIN., PASSENGER VEHICLE OCCUPANT FATALITY RATES BY TYPE AND SIZE OF VEHICLE (2006).

methodology can be used to guide the kind of emergency intervention decisions that are familiar to anyone who watches television.⁶⁵ Images like that of a girl trapped in a well, or of coal miners trapped in a subterranean shaft, often inspire heroic efforts at rescue. Rarely if ever is there any discussion of cost—except perhaps to impress the observer with the size and rarity of equipment being used. Viscusi does not directly answer his own question, which is itself interesting. Instead, he asks whether society would be willing to make equivalent expenditures to rescue, for example, the 45,000 people killed each year in traffic accidents.⁶⁶

This is a fair question. I detect little enthusiasm for posting a full complement of EMTs at every traffic stop. But Professor Viscusi might do well to reflect on his question from the perspective of the economist that he is. These heroic interventions represent natural experiments rich with data. In each, we have a collective decision being made to save a number of lives identifiable with the kind of precision of which regulatory economists can only dream. Are these not the very best data points from which to derive society's willingness to pay for human life? At a minimum, it would be interesting to observe at what points of expenditure safety officials (with tacit public consent) conclude that they have done all that they reasonably can. This explicit decision data might be blended with other (often implicit and difficult to measure) data from market studies to arrive at a more nuanced approximation of social WTP.⁶⁷

Risk-Risk Tradeoffs

Viscusi points to additional indirect costs of regulation.⁶⁸ He then applies a measure he has previously derived for propensity to spend income on health (and finds that it is 0.1).⁶⁹ Therefore, a \$1 million loss of wealth implies \$100,000 less spent on health. Applying a simple VSL, he concludes that \$70 million of regulation results in the loss of one statistical life.⁷⁰ Viscusi notes that other "propensity" measures and different VSLs obviously result in very different calculations.⁷¹

65. Viscusi, *Monetizing the Benefits*, *supra* note 2, at XX.

66. *Id.* at XX.

67. One might argue that decisions made while a telegenic family pleads before the cameras for a child's rescue may be a far cry from the dispassionate analysis said to be the strength of regulatory decision-making. I agree, but Viscusi does not subject market determinations to the same scrutiny. These decisions may be just as irrational (though informative) as any other decision.

68. Viscusi, *Monetizing the Benefits*, *supra* note 2, at XX.

69. *Id.* at ___.

70. *Id.*

71. *Id.* at ___.

This small methodological point must nevertheless be kept firmly in mind. The econometric measures that Viscusi finds plausible will generate dramatically different estimates of the number of “statistical murders”⁷² caused by inefficient regulation. There is a tendency, both in Viscusi’s own work and in this field generally, for regulatory assessments to bootstrap such data into concrete without qualifying it as the inferential leap that it is. Policymakers would do well to recover from CBA enthusiasts the measure of uncertainty that their own analyses often reveal. I suppose one should regret any number of statistical murders. But might not we feel somewhat differently if the number is 20,000 (or 200,000) annually? Very modest changes in econometric assumptions can generate order-of-magnitude changes.

On some level, Viscusi’s observation must be sound. One can easily imagine a workplace regulation that is so costly, the employer cannot afford to operate, and the employees lose their jobs. No doubt, one could trace the effects of these layoffs as they reverberate through the economy (though Professor Ackerman suggests some unrecognized complications here).⁷³ Viscusi’s observation seeks to instantiate the inevitable tradeoff at the level of individual health expenditures. I do not find this persuasive for several reasons.

Defining health expenditure for purposes of measuring the “propensity effect” is very difficult, and relies on proxies that are unlikely to capture heterogeneous preferences perfectly. Gym memberships, health insurance, refraining from eating fatty foods, and drinking a daily glass of wine are all activities that can be expressed as expenditures, although they have different consequences and implicate preferences that cannot be generically described. Again, I take it that (as Viscusi tantalizingly suggests is true of smokers’ behavior) action in one health-related domain is unlikely to be totally uncorrelated with action in another.⁷⁴ But the correlation would have to be high, and the effect uniform, if we are to predicate quantitative policy on such observations.

Second, an early study on this subject observed great income elasticity, which is what one would expect. In other words, the propensity effect falls sharply above modest incomes.⁷⁵ This is not surprising. In the absence of

72. See ACKERMAN & HEINZERLING, *supra* note 7, at 54 (attributing to John Graham the term “statistical murder” to describe the risk-risk tradeoffs implied by regulatory expenditures).

73. See Frank Ackerman, *The Unbearable Lightness of Regulatory Costs*, 33 *FORDHAM URB. L.J.* XX (2006).

74. Viscusi, *Monetizing the Benefits*, *supra* note 2, at XX.

75. ACKERMAN & HEINZERLING, *supra* note 7, at 57.

a serious medical condition, how much health expense does one need? Once a threshold of averageness or typicality is reached (say, the approximately \$10,000 it costs to insure a family of four), it is implausible that additional income will linearly be spent on health care. Even more problematic for Viscusi's claim is that marginal expenditures above a certain range are highly unlikely to return equivalent health benefits.

For example, I wear very expensive glasses. This is due to a combination of the stylish frames I fancy and my preference for the thinnest possible lens. This is called "indexing," and the process easily doubles the cost of my lenses. Undoubtedly, I could not afford this indulgence if I earned half of my present salary, but in no way does this improve my health; it just makes me think I'm more attractive to women. That is perhaps an important determinant of my mental health, but it strains credulity to suppose that if 35,000 people each spent \$200 less on eyeglasses, one of them will wind up dead. I imagine that Viscusi would agree with this, but he does not sufficiently qualify his observations to confirm that they cannot be taken literally across all iterations of health expenditure.

A similar problem appears when one considers the distribution of regulatory costs. Viscusi's analysis lends itself to the characterization of distributional uniformity; that is, one imagines that the regulatory "tax" is imposed per capita, making possible the easy arithmetic that leads to a marginal reduction in health expenditure. But there are no environmental regulations that actually work this way. We may divide regulatory burdens into two categories. The first, direct burdens, extract resources from citizens (say, the administrative expenses of the Environmental Protection Agency (EPA)). Many regulatory burdens, however, are indirect. For example, the EPA requires pollution controls, the costs of which are likely to be passed on to consumers.

Direct burdens are not distributed equally. Many people pay no income tax at all, which means they will only receive the benefits of health and safety measures funded by the government. It is interesting to observe that, assuming the propensity effect does in fact fade with income, there may be little to it at the income strata where people are actually burdened.

Of course, certain direct burdens are broad-based. Many people who do not pay income tax pay taxes on gasoline. Again, however, the distribution of gasoline taxes is not uniform. People who live in rural areas are far more likely to pay that tax than people who live in New York City.

Indirect regulatory burdens also have complex distributional consequences. Like the gasoline tax, these burdens only affect people who consume the safety- or health-regulated product. Imagine a coal plant in

the Midwest subject to stricter emissions controls. If those costs are passed on in their entirety to consumers (rather than being partially borne by shareholders in the form of lower dividends, a possibility Viscusi does not acknowledge in sketching out his broad claims), they will indeed reduce the income of Midwesterners. That is unfortunate, but will not be of immediate concern to residents in New England, which draws a large share of its electrical power from nuclear energy. Interestingly enough, they happen to begrudge Midwestern industry for acid rain.⁷⁶

Another very serious problem anticipated by my eyeglasses example is the presumed insensitivity of the propensity effect to the amount of expenditure. An evenly distributed direct regulatory burden of \$1 billion is less than a penny a day. Does Professor Viscusi believe that this is likely to lead to even a single loss of life?⁷⁷

The point here is not that there could not be a reduction in health expenditure attendant to health and safety regulation. Rather, the heterogeneity of any such reductions and their consequences simply cannot be captured by applying Viscusi's 0.1 figure across all regulatory domains and populations. To be sure, actually tracing these effects with empirical certainty would be a daunting task. I do not begrudge Viscusi for attempting to address the risk-risk question efficiently, but must note that this limits what we can do with his observations.

Finally, one cannot miss the one-way character of Viscusi's analysis. Viscusi acknowledges that regulations may have collateral benefits that may offset the collateral risks on which he focuses.⁷⁸ Perhaps this is a matter of comparative advantage, but I am at a loss to understand why an economist would choose to focus on one side of an equation.

For example, space program enthusiasts regularly point out the many technologies—Velcro, Tang, new radios, fuel cells—said to stem from our explorations. While it would be difficult to quantify their economic effects, it seems likely that the “We Spent \$20 Billion Going Into Space and All We Got Were These Lousy Paperweights!” position would be incomplete.

Where is the Tang in Viscusi's analysis of environmental regulation? In his paper, John Graham makes a similar elision with respect to indirect burdens.⁷⁹ But, many of these are largely wealth-transferring, not wealth-

⁷⁶ *Acid Rain Impact Remains a Concern*, CNN.COM, Mar. 21, 2001, <http://archives.cnn.com/2001/TECH/science/03/26/acid.rain.report/index.html> (last visited Apr. 21, 2006).

⁷⁷ This example is drawn from a similar observation by Ackerman and Heinzerling. See ACKERMAN & HEINZERLING, *supra* note 7, at 57-58.

⁷⁸ Viscusi, *Monetizing the Benefits*, *supra* note 2, at XX.

⁷⁹ John D. Graham et al., *Managing the Regulatory State: The Experience of the Bush*

destroying regulations. For example, requiring new low-sulfur fuels or advanced smokestack scrubbers means more dollars flowing into the sulfur-reduction and scrubber-manufacturing industries. I suspect these are fairly profitable businesses in which to work. Of course, nothing is free. Presumably, transactional friction will mean that transfers are not perfectly efficient. But, this does not imply that the money simply disappears. And, if there are even modest multiplier effects for those industries and workers fortunate enough to benefit from regulation-induced demand, the net effects may be positive.

I certainly can express no opinion on whether this is typically the case with environmental regulations. But it is unfortunate that Professor Viscusi focuses on the (broadly speaking) deregulatory implications of ancillary risk tradeoffs.⁸⁰ “Benefit multiplier” effects may be harder to measure, but from the perspective of causation, their propinquity to regulation seems equal to the “risk-risk” tradeoffs Viscusi emphasizes. As someone who welcomes economic insights into legal thought, it is frustrating to see Viscusi giving political opponents of CBA—who assume it can only favor big business—such an obvious opportunity.

One Nation Under Economists?

While I am very evidently not an economist, many of the concerns sketched above may be described as methodological. It is only fair to acknowledge that while I am comfortable with my intuitions (who isn’t?), many of these concerns must penultimately be left to economists to resolve.

I say “penultimately” because the goal of the CBA project is to inform and guide public decisionmaking. But those decisions are ultimately political. The question is the extent to which CBA methodologies provide the “right” answer. For a number of reasons, I find myself skeptical that market preferences, even if accurately captured, ought to be imported into all regulatory domains.

Viscusi makes an interesting point about why regulatory agencies might validly use different VSLs for different populations.⁸¹ Returning to the example of airline safety, airline passengers have higher incomes than average, and correspondingly higher VSLs.⁸² Viscusi suggests that when considering emergency lighting, or other airline safety regulation, that these

Administration, 33 FORDHAM URB. L.J. XX (2006).

80. Viscusi, *Monetizing the Benefits*, *supra* note 2, at XX.

81. *See id.* at XX.

82. *Id.*

higher VSLs ought to be used.⁸³ Correspondingly, where a regulation is addressed to the safety of the typical citizen, his lower VSL correctly implies that less safety is due.⁸⁴

To the obvious equity concern this presents, Viscusi notes that airline safety regulations are not funded from a public regulatory budget, but from airlines.⁸⁵ I agree. Thus, if airline passengers really desire greater safety, it is reasonable for gap-filling safety regulation to reflect this.⁸⁶

Other regulations might be described as market-substitutes. Determining the optimal speed limit for a curvy stretch of road does not supplement the terms of a private contract; only the government can make that decision, and public policy is largely a matter of averages. Thus, use of an average VSL (reflecting the typical user) is appropriate.

The question is the “fit” between market transactions in safety and the demands citizens might make upon their government. Markets are truly astonishing machines for aggregating and disseminating information. Their capacity to describe external reality, however, is limited by the extent of participation. Putting aside the methodological qualms I described earlier, I assume market observations can tell us a great deal about what we might expect of unobserved behavior of people *in the market*. These observations may tell us little about people who are not in the market.

Suppose that the price of a good is \$100. That figure is only informative with respect to people who have at least \$100. It does not tell us much about the preferences of people who do not have that \$100 to spend. I do not argue that this is unfair, but merely observe that market-based valuations necessarily exclude in their entirety the preferences of non-participants. I call these unregistered preferences “market undervotes.”

Market undervotes are problematic where public policy is determined by expressed market preferences. Just as risky jobs are unlikely to be held by women, they are unlikely to be held by relatively older people. Indeed, they are less likely to be held by people who are risk-averse. What, then, does a risky-job wage premium tell us about the risk preferences of these other groups?

Of course, there are many less risky jobs held by other swathes of the population, and Viscusi’s data addresses them.⁸⁷ Certainly, this must push

83. *Id.*

84. *Id.*

85. *See id.* at ___.

86. Viscusi does not, however, address the proper VSL for people who rely on urban buses or intercity bus transit, whose lower incomes surely would imply less safety regulation.

87. *See Viscusi, Monetizing the Benefits, supra* note 2, at ___.

our market valuation closer to the “true” (unobserved) preference of the population. But, there are many people who do not work at all (the elderly or infirm),⁸⁸ or who do not consume goods with high implied safety premia (safe cars) as much as others. Observed market transactions can tell us little about their true preferences.

Of course, we do have markets for determining such preferences—politics. While I take seriously Viscusi’s challenge to make public policy science-based (rather than based on public perception), it presents two distinct types of problems. First, much of the “science” on which Viscusi would have us rely depends on public perceptions. After all, what are market data but the revealed preferences of some subset of the population? Viscusi notes that it might very well be a bad idea to regulate dreaded (but small) risks rather than larger, but less salient ones.⁸⁹ I happen to agree, but am unsure how to reconcile this with his stated confidence in those same biases, clothed in market decisions.

For example, it has taken some time for the public to accept that HIV-infected persons do not pose a significant risk to those with whom they have the normal social contacts incident to daily life.⁹⁰ However, there remains a residue of dread, particularly where children are involved. I have no doubt that were Viscusi to examine market data, supplemented with the view from Greensboro, he would detect that known HIV-infected teachers are paid less because many parents (despite knowing better, or perhaps not) would rather their children be taught by non-HIV-infected individuals. What are we to do with such information from a regulatory perspective? On the one hand, it reflects an exaggerated risk perception (which may be irrational, though not unreasonable).⁹¹ However, an observed wage

88. One of the seemingly perverse insights of CBA is that we might value the lives of the elderly less. Certainly, this is already true of tort law. Should it be true of regulatory policy? Many environmental regulations return benefits to the elderly, who are more susceptible to environmental risks. The “senior discount” has been reflexively criticized. Let me confine myself to two observations. First, discounting does not appear to account for the fact that the lives saved are often those of the present regulation-paying generation. Whether I “owe” senior citizens better air quality than I currently require is a question altogether different than whether I am willing to pre-fund my need for better air quality thirty years from now. Second, Viscusi suggests that wage-risk premia for workers aged fifty-five to sixty-two are not markedly different from those commanded by younger workers. *Id.* at XX. Perhaps I am misreading this, but I do not see the relevance of this observation. The fact is that such data tell us nothing whatsoever about the correct values to be assigned people over the age of sixty-two, who are not in the workforce.

89. *Id.* at XX.

90. See, e.g., Richard Turkington, *Confidentiality Policy for HIV-Related Information: An Analytical Framework for Sorting Out Hard and Easy Cases*, 34 VILL. L. REV. 871, 888 (1989).

91. For discussion on this distinction, see Greg Keating, *Reasonableness and Rationality*

differential is unmistakably a manifestation of some underlying reality. Which reality should govern?

This problem suggests that one ought to comprehensively “correct” observed data for all kinds of irrational preferences that the market does not distinguish from rational ones. If it is true that minorities do not obtain commensurate risk premia, these data might be treated as “market undervotes” to be discarded in favor of data unaffected by systemic racism.⁹² If women are largely segmented into non-risky work (for reasons other than their native risk aversion), then we must adjust these figures to arrive at the “true” measure of wage-risk preference. It takes little imagination to conceive of endless iterations of this theme, but a great deal of imagination (not possessed by this observer) to see how this task could be reliably accomplished.

Returning to politics, we see an equally plausible and arguably more legitimate contender for discerning preferences: votes. Suppose fifty-one percent of the voting public prefers to spend a sum equal to ten times the average market-derived VSL for safety and proposes to extract this sum from the wealthiest five percent of the public. Generally speaking, I would find this pretty distasteful; Viscusi would be at his best, no doubt, in illustrating why such a move might be far from ideal. But I cannot see how this preference is not in fact the “correct” answer—where mathematical correctness is largely a function of counting votes. Of course, we do not subject most regulations to plebiscite, but in a democracy, agencies ought to act upon the preferences of the people. Thus, if surveys or (preferably) an annual vote established the majority’s willingness to spend the minority’s money, this logically ought to provide the template for regulatory calculus.

I cannot imagine that many readers will be very comfortable with this observation. I certainly am not. But I offer it as a counterpoint to Viscusi’s suggestion, implicit in the CBA project, that private market data clearly provide the “right” answer to regulatory equations. One need not be a relativist to see that there are a number of contenders for truth in valuing life and safety. Moreover, economics does not seem immune to the commonly possessed trait among academic disciplines of thinking that society would be much better off if only it would listen to the discipline’s insights. “One Nation Under Economists”⁹³ is about as appealing as governance by law professors. In this sense, CBA may without undue

in Negligence Theory, 48 STAN. L. REV. 311 (1996).

92. See, e.g., Dorothy A. Brown, *Pensions, Risk and Race*, 61 WASH. & LEE L. REV. 1501, 1530-38 (2004) (noting race-variant preferences in investment decisions).

93. My apologies to Professor Glendon.

cynicism be viewed as merely the latest venue-shifting game. On this view, the participants relocate decision-making from messy (and often incoherent, contradictory, and process-encrusted) public venues to the OMB (pausing briefly at the Harvard Center for Risk Analysis). In other words, to caricature only slightly then-Professor Breyer's ideal risk regulator, it turns out that the ideal risk regulator, insulated from the static of public misperceptions is, well, Professor Breyer!⁹⁴

CONCLUSION

Professor Viscusi's paper is modest; I believe he would say that he seeks only to guide and inform decision-making, not substitute his judgment for a risk-ignorant public. But the overall CBA project is positively Olympian in its confidence; to derive arithmetic expressions of our diverse, conflicting, and fundamentally ineffable values, it would have to be. I believe the project is inevitable, and stress that I share its aspirations for rational public policymaking. But I have the uneasy feeling that, like a previous Olympian effort involving Mt. Ossa and Mt. Pelion (with which CBA's layers of inference have altogether too much in common), its confidence is misplaced.⁹⁵

94. See generally STEPHEN BREYER, *BREAKING THE VICIOUS CIRCLE: TOWARD EFFECTIVE RISK REGULATION* (1993).

95. I do not agree with Sally Katzen's suggestion that the time has come to put CBA aside. Sally Katzen, *Cost-Benefit Analysis: Where Should We Go From Here?*, 33 FORDHAM URB. L.J. XX (2006). Indeed, my basic concern is that the state of the art—and art it surely is—remains in its infancy. There is far too much uncertainty, often unexpressed by CBA enthusiasts when decisions must actually be taken (careful qualifications abound in the literature), to make of this project a reliable metric for determining public policy. It is a guide, not a map.