

The Application Of The Hedonic Damages Concept To Wrongful Death And Personal Injury Litigation

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I. Introduction

In a recent article Havrilesky (1993) argues against applying the hedonic damages concept to wrongful death and injury cases. The purpose of this paper is to critique his arguments. An examination of each of the seven points shows that none are appropriate. This analysis follows the same order and is under the same headings as Havrilesky's analysis. The conclusion section is added to summarize the paper.

II. The Value of the Avoidance of Injury vs. the Value of Individual Whole Life

Havrilesky argues in this section that since the estimated value of an anonymous or statistical person is not the same as the value that an individual places on his or her own life, the use of the value of an anonymous person in litigation is incorrect. The premise of the argument is true and not controversial. There is a difference between the estimated value of an anonymous person's life and the value that an individual places on his or her own life. The conclusion that the value of an anonymous person's life is not useful in litigation does not, however, necessarily follow from that premise.

Obviously, the interpretation of what the empirical value of life studies are estimating is crucial. Begin with the example provided by Havrilesky: a group of 1000 workers accept a job which carries an extra risk of one death in 1000 per year and receives a wage premium of \$3000 per worker per year as a result. Havrilesky then states that

it is sometimes said that because the aggregate compensation for risk for the group of 1000 is \$3 million, they value the loss of an anonymous one of their number at \$3 million.
(p. 94)

The first task is to show that there is wide-spread agreement in the literature that the group in this example places a value of \$3 million on the life of an anonymous member of the group. This agreement allows the removal of the qualifier "it is sometimes said."

The following statements by Viscusi (1990) are examples of how the estimates are interpreted:

*The author wishes to thank Ken Yasuda for helpful comments

In a competitive market, the extra wage premium that workers receive for risk will reflect their attitudes towards bearing risk. The observed risk-dollar tradeoff can then be used to calculate the implicit value of life or injury.

The most recent evidence using the newly available data on death risks developed by the National Institute of Occupational Safety and Health indicates that the average blue-collar worker receives an extra \$600 in wage compensation for bearing an average death risk of 1/10,000. These results correspond to an implicit value per statistical death of \$6 million. (p. 8)

Fisher, Violette and Chestnut (1989) provide a similar example,

the value of a statistical life represents what the whole group is willing to pay for reducing each member's risk by a small amount. For example, if each of 100,000 persons is willing to pay \$20 for a reduction in risk from 3 deaths per 100,000 to 1 death per 100,000 the total WTP is \$2,000,000 and the value per statistical life is \$1 million (with 2 lives saved). (p. 89)

Havrilesky (1992) states

Since the aggregate compensation for risk for the group of 1000 is \$3 million, they, as a community, value the loss of an anonymous one of their numbers at \$3 million. (p. 2)

Miller (1990) states

Sixty-seven analyses have estimated the value of a statistical life, generally from estimates of how much people pay for small changes in their survival probabilities. (p. 17)

These statements reflect the consensus opinion that the studies estimate the value that society, or a group in society, places on an anonymous or statistical person.

Havrilesky then makes two points concerning the calculation of the aggregate compensation. The first point is that

this type of group evaluation of an anonymous life is not necessary in studies of the net benefits of actions which would alter the small risks imposed on a designated group of workers or consumers. (p. 94)

Technically this may be true. Consider an action which will affect 1000 workers, cost \$3 million and will reduce the probability of death by 1/10,000. The cost of implementation for each worker is \$300. Then, if the benefit to each worker of the reduced probability to death by 1/10,000 is greater than \$300 there is a net benefit. Thus, the "group evaluation of an anonymous life" is not calculated to test if there is a net benefit. However,

this reasoning is equivalent to the reasoning that if the aggregate benefit to the workers is greater than \$3 million there is a net benefit. So, although it is not necessary to calculate the "group evaluation of the value of an anonymous life" the reasoning is equivalent.

The second point is

aggregate compensation for risk (anonymous life values) should not simply be assigned to the whole value of and individual human life. The concept of hedonic damages was never intended for this application; it does not fit. This sort of aggregate group valuation is simply irrelevant to wrongful death and personal injury litigation. (p. 94)

The first two sentences are true in that: 1) the value society places on an anonymous person's life is not the same value that a particular person would place on his or her life; and, 2) the empirical value of life studies are not estimating the value that an individual places on his or her life. These points are acknowledged in the literature. Brookshire & Smith (1990) state

the studies focus upon the saving of lives of people who for the most part are anonymous, unknown individuals.

These studies give us enormous insight into the issue of value since they reflect the attitudes and opinions of our contemporary American culture. (p. 167)

Frankel and Linke (1992) illustrate the two distinct interpretations of an example analogous to the one above. They state

The aggregate of compensation received by the 1000 workers is \$2 million. Hence it may be said that collectively they value the loss of one of their numbers at that figure.

and

Each individual worker is effectively giving up 1/1000th of his life for \$2000. Hence he must value his whole life at a thousand time as much, or \$2 million. (p. 234)

The second interpretation is not correct (see section III below). Nor, as was illustrated above, is the second interpretation the consensus interpretation. And thus, as Havrilesky points out, the whole life value of an individual (the amount one places on one's life) is not the same as the aggregate compensation.

The truth of the final sentence, that the estimated values of life are "simply irrelevant" in litigation, is not obvious. If a court decides, or is obligated by law, to compensate for the non-pecuniary losses in a wrongful death or injury case it seems very reasonable that the trier of facts may find it beneficial to be informed of the body of scientific knowledge concerning the value that society places on the life of an anonymous person.¹ It is true that

¹ This point is recognized by Chestnut and Violette (1990) who state "We conclude that the WTP estimates are potentially useful when the definition of compensation involves putting a dollar figure on non-financial losses to the deceased or to survivors." (pp. 87-88)

how society values an anonymous life is irrelevant to how an individual values his or her own life. It does not, however, follow that how society values an anonymous life is irrelevant to litigation settings. To dismiss the scientific studies, which the economics profession has by consensus determined to be the appropriate way to measure the value that society places on a statistically anonymous person,² as "simply irrelevant" is not acceptable.

III. The Irrelevance of Low Incremental Risk Valuation to a Whole Life

In this section Havrilesky cites Frankel and Linke (1992) and Albrecht (1992) to confirm that it is inappropriate to use the small risk evaluation paradigm to infer the value that an individual actually places on his or her life. Albrecht shows that for a risk-averse person the amount the person would trade his or her life for is more than the value that society places on the life of an anonymous individual. Albrecht's paper reinforces the necessity of interpreting and presenting the value of life amounts as the amount that society places on the life of an anonymous person, not as the amount for which a person would trade his or her life.

A second implication of Albrecht's work is that value of life estimates are dependent upon where on the risk continuum the trade-offs are measured. The higher the absolute level of risk is, the higher the estimated values will be. For this reason, contingency valuation studies, where willingness-to-pay is based upon how people respond to questions, may result in estimates which are substantially different than wage-risk trade-off studies. The wage-risk trade-off studies are superior in the sense that they would necessarily reflect the supply and demand conditions for risk in contemporary society.

IV. The Irrelevance of an Anonymous Life

Havrilesky reasons that in a wrongful death action a great deal is known about the deceased and so the value that society places on an anonymous person's life is not relevant. This is analogous to reasoning that the use of most general statistics, e.g., life expectancy or unemployment rates, should not be used as they are for an anonymous or typical person, not the particular individual in question. The literature shows that forensic economists often use statistics which apply to the typical person. Certainly, evidence may be presented to show that the particular individual in question is typical or atypical.

Havrilesky goes on to state that anonymous life values "do not reflect the decisions of a unique individual in a unique, high risk, income-constrained, whole life-related situation." (p. 95) This is true. Anonymous life values are what they are, a measure of how society values the life of an anonymous individual.

V. The Misallocation of Resources

Rubin and Calfee (1992) argue that payments for non-pecuniary damages lead to a misallocation of resources. Their paper does not contain ar-

² See Fisher, Chestnut and Violette (1989, p 88).

guments unique to hedonic damages but relates to any payments for non-pecuniary losses. Havrilesky refers to the Rubin & Calfee article to reason that hedonic damages not be used in litigation.

Assume for the moment that payments for non-pecuniary damages lead to a misallocation of resources. Also assume that the law states that non-pecuniary damages are to be compensated. Given the law, the economist may either ignore the law or to assist in implementing a law which misallocates resources. This dilemma is a concern for the individual economist.

However, it is certainly not the consensus that non-pecuniary payments not be made. One example is Chestnut and Violette (1990) who state that compensation for financial loss only is not adequate to provide the right incentives for accident prevention. Another example is provided by Havrilesky (1990) who states that the "ability-to-pay value is a reasonable constraining principle or lower bound in loss-of-enjoyment-of-life cases." (p. 73) Although Havrilesky advocates a particular method for determining non-pecuniary losses he opposes the use of value of life studies on the grounds that non-pecuniary damages should not be compensated.

VI. The Inaccuracy of Small Risk Valuations

In this section Havrilesky identifies three areas of concern. The first concern is that workers and consumers do not effectively value small probabilities. The evidence presented includes the fact that people buy lottery tickets which have a negative expected pay-off. This point is addressed by Viscusi (1990b). He cites empirical studies³ which used perceived risks and concludes that estimates using subjective and objective evaluations of risk result in estimates which are similar in magnitude.

The second concern is that "enigmatic behavior abounds". Havrilesky presents an example that a

person who would pay \$500 for an airbag might also refuse to use a seat belt at zero cost and/or might insist on smoking two packs of cigarettes a day. (p. 96)

A fully informed, rational person may exhibit this behavior. A rational person may decide to trade life expectancy for the pleasure of smoking just as a rational person may decide to drive an extra mile, thus increasing the risk of death, to eat at restaurant A instead of restaurant B. And, a rational person may find that wearing a seat belt is uncomfortable or for some other reason causes displeasure, and that the reduced probability of death does not out-weigh the displeasure but that the reduction in the probability of death by the passive airbag warrants its purchase.

The third concern is that

Wage risk studies need to control for other basic factors which affect employer and worker decisions, such as unpleasant aspects of the job and labor market imperfections. Without adequate controls for these sorts of factors, the premium paid to accept risk is likely to be overstated. (p. 96)

³ See Gerking, de Haan and Schulze (1988), Hersch and Viscusi (1990), Viscusi (1978), Viscusi (1979), Viscusi and O'Connor (1984)

Whether these variables are, in fact, relevant is an empirical question. If a variable is relevant it should, of course, be taken into account when data allows.⁴ This point is discussed further in section VII.

VII. The High Variance of Estimates of Anonymous Life Values

Havrilesky's point is that courts should have little confidence in the value of life estimates because different studies result in varying estimates. The variance is a problem, Havrilesky contends, because it is due to 1) omitted variables and 2) "differences in methods employed by the researchers who prepare the statistical estimates" (p. 96). By definition, omitted variables affect the estimates. And, that "differences in methods" result in different estimates can be anticipated.⁵

Many studies exist and there are differences in the estimates. Differences will exist due to different variables used (possibly omitted variables), different methods employed and different samples used. These differences would be expected in the estimation of any economic variable. The differences, to a large extent, define the role of the economist who is citing the estimates. It is the economist's task to study and sort through the estimates and come to his or her own conclusions concerning which estimates are the most reliable. Rather than ignoring the body of literature which estimates the compensating differential we may wish to recognize that, as Viscusi eloquently states

The basic elements of this theory are not controversial. Although empirical estimation of the tradeoff between risk and wages is continuing to be refined, there is general acceptance of the existence and importance of such a linkage. . . . As with empirical estimates of other economic relationships, there will be some error involved in the process. The empirical task is to continually refine our analysis of these relationships so that we can better understand their magnitude.
(p. 61)

VIII. Society Cannot Afford To Apply Hedonic Valuations in Wrongful Death and Injury Litigation

It is widely, if not universally, accepted in the economics profession that when the price of a resource does not reflect the value that society places on it, the allocation of that resource will be sub-optimal. If the price paid by drunk drivers for lives they consume is less than the value that society places on the life, the number of lives consumed by drunk drivers will exceed the optimal number. However, Havrilesky does not believe that we can "afford" to place the optimizing price on life.

⁴ Viscusi (1990b, pp 67 & 68) discusses the omitted variable criticism and reports that the job pleasantness variables were not statistically significant. And, he states that taking the factors into account is feasible.

⁵ One source of variation that Havrilesky does not discuss is that of different samples used to make the estimates. Viscusi (1990b) addresses this topic. Workers will, to some extent, sort themselves into different occupations according to their attitudes about risk.

IX. Conclusion

Sections II, III, and IV revolve around the fact that estimated values of life are not the same as the value that a person places on his or her own life. This difference does not detract from the fact that the estimated values of life do reflect the value that society places on an anonymous person's life. And, these estimates may be beneficial in litigation. Sections V and VIII concern the allocation of resources in society. To internalize externalities it is necessary to force the user of the resource to pay the price that reflects how society values the resource. This strategy is generally regarded as optimizing the allocation of resources. But, Havrilesky contends that society can not afford this pricing strategy. One part in Section VI finds it puzzling that people will expose themselves to additional risk in order to experience pleasure. Another part of Section VI and Section VII bring out the fact that estimates vary when different variables and different methods are used. If an economist does not feel competent or does not have the inclination to sort through the studies and come to his or her own conclusions about which are more reliable, then he or she should probably not cite the studies.

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