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Why Hedonic Measures Are Irrelevant to Wrongful Death Litigation

With the initial acceptance of hedonic valuation in *Sherrod v. Berry* (1987), a new industry of *expert* witnesses has arisen ready to testify to the pecuniary value of *hedonic* or whole life values on behalf of plaintiffs in wrongful death cases. The reason is simple--financial incentive. Hedonic or whole life valuations produce damage estimates that are in addition to the human capital losses economists were using before 1987. Plaintiffs' attorneys, eager for larger numbers, have sought out *experts* willing to give them these larger loss estimates, and the market for expert testimony has responded with persons willing to provide these larger figures.

The extent of this market response is demonstrated by advertisements offering to supply the materials necessary to provide such testimony and the creation of one or two day workshops offering hedonic certification for fees ranging from $75 to $100. These advertisements imply that persons attending the sessions will qualify to provide expert testimony on the value of life. Some of the uses of this type of testimony are such that a two day workshop or an $80 set of materials is, in fact, all that is necessary to provide such testimony. Such uses, however, are irrelevant to the purposes of wrongful death litigation. They convert the process of death recovery by survivors into a kind of implicit lottery that has little to do with the intentions of laws allowing the recovery of survivor damages.

Whole life valuation is based on the fact that human life does have more value than traditional measures of human capital can capture. No economist who relies on the human capital approach would deny that reality. What is called the human capital approach to damage assessment measures the income stream that is lost because of a wrongful death. Life is worth more than an income stream. The pleasures of life are important, and government agencies are correct in placing values on human life that are greater than those that could be derived from the human capital approach. However, that fact does not mean that one can value whole human lives correctly, whether by *hedonic* or any other method of economic science. Nor does it mean that such valuations, no matter how derived by any discipline, have relevance in wrongful death litigation.

When the human capital valuation method is used correctly, this approach involves projecting a relationship between the rate of income increase over time and an appropriate discount rate

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for reducing future income payments to present value. Other discounts are made for the probability of survival over the projected work life, the probability that the decedent would have been fully employed, and the probability that the decedent would have participated in both the labor market and in household production. While abuses of this approach have occurred, damage figures derived from it are based on the specifics of the life of the decedent and normally produce damage estimates that are significantly smaller than whole life or hedonic estimates.

The remander of this paper considers the focus of wrongful death litigation and the lack of a link between hedonic estimates of the value of life and that focus.

The Focus of Wrongful Death Litigation

Wrongful death litigation is designed to enable survivors to recover their consequent damages resulting from the wrongful death of the decedent. In most states, it is not the purpose of wrongful death acts to allow survivors to recover the loss to the decedent. The purpose is to allow survivors to recover their own losses, not the full value of what the decedent lost. This parallels the recovery of injured parties in other types of legal actions.

In most damage recovery actions, the focus of state laws is on the concept of "making whole" the wrongly injured party. Following an automobile accident, a wrongly injured party is entitled to sue for the cost of repairing or replacing his automobile and costs of past and future medical care (which sometimes do involve damages in the ranges reached by hedonic estimates). But the underlying concept is that the wrongfully injured party will be returned to a state of well being equivalent to that he or she had before the injury.

In a wrongful death case, that cannot be done in the case of the decedent. The decedent cannot be "made whole" and *no* amount of recovery by the decedent's survivors can offset the damage suffered by the decedent. The fundamental valuation question in economics is "how much money would it take so that the individual is no worse off than if the accident had not occurred?" In a wrongful death circumstance, the correct answer is that *no* amount of money paid to survivors could make the decedent as well off as if he or she hadn't been killed. This is the reason why most state legislators wrote the wrongful death statutes as they have, focusing on losses by survivors, rather than losses to the decedent. The loss to the decedent is meaningless in economic terms. Current estimates of hedonic losses range anywhere from $700,000 to $13 million for a *value of anonymous life*. Would $13 million, or even any larger amount, awarded to his or her survivors make the dead person as well off as if he or she had not been killed?

Sources of Whole Life (Hedonic) Valuation

According to Michael Brookshire and Stan Smith (who was the plaintiff's economist in *Sherrod v. Berry*), there are four sources of hedonic valuation:

1. Studies based on data regarding what private citizens spend on items they use to increase their own safety such as air bags, smoke detectors, larger tires, and so forth.
2. How much more customers pay to fly on airlines with better safety reputations and similar consumer expenditures based on safety differentials in service delivery.
3. How much more workers must be paid to accept jobs with greater life risk such as coal mining or high beam welding.

4. Values used by government agencies in cost-benefit calculations to account for probable losses of life.

The first three of these sources can be effectively grouped together as *willingness to pay* (WTP) calculations. The fourth governmental source involves life values used in cost-benefit analysis for other purposes such as highway construction and the evaluation of safety regulations. Government agency numbers are typically derived initially from WTP studies, and vary widely among agencies. These basic sources will be considered in turn.

Willingness to Pay

In assessing the relevance of WTP based measures of whole life valuation, two basic points are critical: first, the basic purpose of the WTP methodology is to place a value, based on what people reveal that they are willing to pay, on changes in the risk of death. This is not the same thing as determining the intrinsic value society places on life. Thomas Schelling, in one of the pioneer papers of the WTP literature (1968) stated, "It is not the worth of human life I will discuss, but of 'life saving,' of preventing death. And it is not a particular death, but a statistical death. What is it worth to reduce the probability of death--the statistical frequency of death--within some identifiable group of people none of whom expects to die except eventually?"

Second, all WTP measures are *ex ante* measures. They measure, at best, what an average person would pay to have his or her own risk of fatal injury reduced by a very small amount, or what that person would demand in payment for being exposed to a very small increase in the risk of his or her own death. The range of risks of fatal injury in the labor market studies reviewed by Fisher, Chestnut and Violette (1989) is from about 1 in 20,000 to about 11 in 10,000.) Knowing what a person would pay for a very small change in risk starting from a very low level of risk in the first place does not reveal what that person would be willing to pay *ex ante* to avoid a very large increase in the risk of death, and especially not the certainty of death.

It also provides no insight into what that person's family members would be willing to pay *ex ante* to avoid an increase in the person's risk of death or would require in compensation *ex post* (i.e., after the person's death) to be as well off as if the person had not been killed. Thus, WTP based numbers are not measures of what survivors have lost, which is what most jurisdictions require juries to measure in wrongful death actions.

Doubt exists about how well WTP based hedonic estimates even measure what they were designed to measure: the value individuals place on changes in risk. Very serious problems are encountered in trying to estimate WTP's from the market choices of workers or consumers. It is often not clear that individuals are fully informed about the risk reductions or risk increases involved in their choices. There is considerable evidence that people do not make choices involving small amounts of risk in a manner consistent with rational behavior. Further, in obtaining statistical estimates of WTP's, appropriate data is often lacking and the assumptions made in the econometric models producing the estimates may be unrealistic. These problems are discussed by Dickens (1990).

The fact that state lotteries and other forms of gambling are successful suggests that a whole market exists because individuals overestimate the significance of small probabilities (Fischoll 1981). If one purchases a state lottery ticket for $1 when the expected payoff is only $.40, he or she is effectively over valuing a small probability of winning by a ratio of 2.5 to 1. If, when a consumer buys an air bag at an additional cost of $200, he or she

makes a corresponding over valuation of the risk reduction, a $2.5 million hedonic value would fall to $1 million. (This depends on a probability of life preservation of .00008, based on the statistical calculation of safety experts of the safety enhancement from $200 air bags.)

The notion that a typical consumer implicitly makes this type of calculation in buying air bags is ludicrous. The typical consumer has no notion of the meaning of a .00008 risk. A consumer who buys an air bag understands that the air bag reduces the risk of death and accepts experts' opinions that the reduced risk is worth the cost but does not imply by this acceptance any specific valuation of life risk. Further, since many consumers do not buy air bags, or any of the other risk reducing items from which such life value projections are made, it seems clear that these other consumers do not accept *experts* opinions that these goods are worth what they cost.

No economic expert would advocate valuing future monetary prize payments based on values placed by consumers on lottery tickets. Large prizes in lotteries are normally income streams paid over a number of years. But an economic expert would only value such a payment stream by traditional discounting procedures, not by some derived value estimates based on willingness to pay by ticket buyers. To use these small risk factors in willingness to pay estimates of hedonic values is implicitly to use a lottery ticket based valuation system.

Similar problems arise from other WTP measures. If consumers avoid an airline because it has a poor safety record, it is usually because of short-term problems with the airline that customers only poorly appreciate. Likewise, job risks are often only poorly appreciated by workers. Here too, actual risks are likely to be overestimated, especially when the probabilities of death are very small. Hedonic estimates of whole life enjoyment are derived by multiplying small expenditures by these small probabilities. Thus, if the probabilities are overestimated by consumers and workers, using smaller actual probabilities significantly overestimates the actual willingness to pay for reduced risk on the part of consumers and workers.

Government Cost-Benefit Values

Within projects initiated by the federal government, some accounting must be given for the fact that most projects involve risk of the loss of human life. Many agencies mandate that specific values be used for human life in the development of the calculations of the costs and benefits of the projects themselves. But the sources of the values that are mandated do not have any particular basis in economic logic. They are typically derived from prior WTP studies that have wide ranges in values. The agencies themselves differ widely as to the appropriate value that should be placed on *the value of anonymous life* and often provide strong disclaimers suggesting that the values used are not to be represented as the true value of life, but only as value controls for the purposes of calculating cost-benefit outcomes.

For efficient resource allocation, it is desirable to have government agencies place a high value on preserving human life, even if the mechanism for valuation is poorly developed. But these calculations are based *ex ante* on preserving human life, while wrongful death litigation is focused on *ex post* recovery of survivors once a death has occurred. These are quite different issues and they pose quite different problems. One of the most significant of those problems is the notion of the *value of an anonymous human life.* On an *ex ante* basis, a government agency does not know the age, medical condition or any other items of specific information about the life being saved.

Ex post, in a wrongful death action, a good deal is known about the individual who was killed. Many of the *hedonic experts* for hire simply present data about the value of life, using numbers for *anonymous human life*. Carried to its logical extreme, this could lead to an *expert* arguing that an 80 year old victim of Alzheimer's Disease who is also dying painfully of cancer has a life value worth millions of dollars.

Michael Brookshire and Stan Smith (1990) argue for calculations that take into account the age of the decedent, but some other *experts* do not discuss any aspect of this issue. Even in the age based analysis of Brookshire and Smith, however, no accounting is made of the fact that a year during the prime of life may not be equal to a year near the end of an 85 year life span.

Conclusion

Survivors in wrongful death litigation should not be limited to recovery for only lost income streams. This is clearly recognized in many state laws which allow for recovery of the loss of consortium, companionship, comfort, instruction, guidance and the counsel of the decedent. These relational values depend in the interaction between people, and they are lost when a decedent is wrongfully killed. They are *hedonic* in the sense that they involve values that exist in psychic forms only and cannot be bought and sold in the commercial marketplace. Any value that is imputed from market equivalents, including household production, is *hedonic* in that sense. But these hedonic relational values also depend on the specifics of the relationships the decedent leaves behind. Children did not lose much of them if their father was brutal, cold, and uncaring. They lose a great deal if he was loving, kind, and instructive. At some point, economists may be able to provide some general insight into these values, but states have wisely relied on judges and juries to weigh these quite specific human factors instead of persons claiming to be *experts* about whole life values. No existing economists are regarded by the economics profession to have expertise in the area of valuation of human relationships, at least in specific dollar terms.

Further, there is no basis for assuming that these *hedonic* relational losses of survivors equal the *hedonic* losses of decedents. A wife with a wonderful husband may lose his consortium, companionship, comfort, instruction, guidance and so forth. Conversely, there is always the possibility that she would have lost these benefits anyway through a divorce even if her husband had not been killed. But even precluding that possibility, she might remarry and find another man with these same qualities. The decedent will not have these opportunities. Human life does have real value and what is lost to the decedent is far greater than what is lost to survivors. Society as a whole has a strong interest in protecting those and other opportunities from being extinguished for any living person, but offering large rewards to survivors based on the *value of anonymous life* after a death has occurred is not the right mechanism for the achievement of that result.

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