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# NOTES

## Hedonic Damages For Wrongful Death: Are Tortfeasors Getting Away With Murder?

An airplane taking off from Big City Airport suddenly explodes, instantly killing all of the passengers and crew. The explosion is a clear result of negligence by Aerodynamic Engines, the manufacturer of the airplane's engines. One of the passengers killed is John Doe, an unemployable man who leaves behind no wife or dependents. He endured no pain and suffering, incurred no medical expenses, and lost no wages as a result of the accident. Nevertheless, John did lose something when he died; he lost his ability to enjoy life. John loved to interact with all people, revelled in classical music, and eagerly awoke in the morning to watch the sun rise and hear robins chirp. Should Aerodynamic Engines be held financially liable for depriving John Doe of the enjoyment of living? If so, how should the courts quantify the loss that resulted from his untimely death?

Virtually every court in the United States would absolve Aerodynamic Engines of any financial liability,<sup>1</sup> even though it clearly committed a tortious act. This is a shocking result, because tort liability should deter negligent behavior. But, as this hypothetical shows, tort law currently does not force tortfeasors like Aerodynamic Engines to internalize a substantial cost of its risky activity. That cost is the loss to dead victims of the value of their lives. Because tortfeasors are not required to bear this cost, they have less incentive to take appropriate precautions to prevent similar accidents in the future.

This note argues that to deter negligent behavior adequately, tortfeasors should be held liable for what may be the most substantial cost they impose on accident victims—"hedonic damages," or the loss of the value of life that results from premature death. Part I argues that courts should assess hedonic damages against tortfeasors to provide enough incentives for the tortfeasor to take the proper amount of precautions to prevent future accidents and losses. Part II argues that courts can closely approximate the appropriate measure of hedonic damages by using economic empirical studies that seek to ascertain the value of a life through a willingness to pay method of valuation. This method computes the value of a human life by observing what that individual would be willing to pay to avoid marginal increases in his risk of death. To minimize litigation costs while still creating efficient incentives, Part III proposes that the amount of a hedonic damages award should be based on the average value of the life of the population put at risk

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1. See *infra* text accompanying notes 19-28.

by the tortfeasor's activity. Part IV then addresses some of the traditional arguments against imposing hedonic damages upon tortfeasors. Finally, Part V explores the implications of the proposed damages awards for various subgroups of our population. This note concludes that the proposed method of calculation would not only improve efficiency, but would also satisfy a fairness or equality criterion. Because it reduces the present disparity in income-based damages awards, it can reduce incentives for tortfeasors to impose a higher risk of death upon groups of individuals with lower future incomes.

Throughout this note, the term "wrongful death action" will refer to an action brought in the decedent's name, even though similar actions are sometimes brought pursuant to survival statutes.<sup>2</sup> Although immediate family members may bring wrongful death actions seeking compensation for their losses, this note is only concerned with quantifying the loss to the decedent. In addition, normative determinations about whether particular activities should be deemed negligent are beyond the scope of this note. Rather, this note begins with the assumption that a tortious act has been committed and considers what the tortfeasor's financial liability should be.

## I. HEDONIC DAMAGES AND THE DETERRENT GOAL OF TORT LAW

Tort law in the United States encompasses two general goals: compensation and deterrence.<sup>3</sup> These goals often intertwine and are not easily separable. Compensation is based upon notions of fairness; we seek to put an innocent victim in the position that he would have been in had the tortfeasor not been negligent.<sup>4</sup> Deterrence, in contrast, is based in part on economic theory; we award a victim damages to discourage potential tortfeasors from engaging in unreasonably risky activities.<sup>5</sup>

In an effort to satisfy the goal of compensation, we sometimes award the

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2. See 2 S. SPEISER, *RECOVERY FOR WRONGFUL DEATH* §§ 14.6-14.10, at 423-36 (2d ed. 1975) (discussing state survival statutes and damages recoverable thereunder). Survival statutes generally provide that if an individual has a cause of action before he dies, then it will continue to exist after his death. *Id.* § 14.1, at 407-10.

3. See R. POSNER, *ECONOMIC ANALYSIS OF LAW* 187 (3d ed. 1986) (discussing compensatory and deterrent functions of tort law); cf. *RESTATEMENT (SECOND) OF TORTS* § 901, at 451-53 (1975) (listing, *inter alia*, compensation and deterrence as the purposes of tort law).

4. See G. CALABRESI, *THE COSTS OF ACCIDENTS: A LEGAL AND ECONOMIC ANALYSIS* 299 (1970) (noting attitude underlying fault system that "the injurer should pay damages according to the degree to which he wronged the victim"); 2 S. SPEISER, C. KRAUSE & A. GANS, *THE AMERICAN LAW OF TORTS* § 8.9, at 471 (1985) ("a plaintiff cannot hold a defendant liable in damages for more than the actual loss [the defendant] has inflicted by his wrong").

5. We want to deter risky activities so that people can live longer. Indeed, T.G. Roupas posits, as the first of his three fundamental ethical principles, "that the longer anyone lives the better, other things being equal." Roupas, *The Value of Life*, 7 *PHIL. & PUB. AFF.* 154, 155 (1978) (discussing the morality of abortion).

victim a sum of money equivalent to the value of a lost limb or lost hearing.<sup>6</sup> Although we are not always convinced a jury can ascertain the price an individual would place on a lost limb, we nevertheless endeavor to mitigate the victim's financial, physical, and emotional costs. In the context of a wrongful death action, however, it is impossible to approximate any value that would put the decedent in the position he occupied before the accident. Unless the victim would have experienced satisfaction from the bargain before his death, he would not have agreed to forfeit his life in exchange for any amount of money.<sup>7</sup> Therefore, it is impossible to compensate a dead victim. Because we cannot compensate a victim in the wrongful death context, the law should not use the compensation rationale of tort law to calculate the damages award. Instead, when computing wrongful death damages, the law should focus on deterrence.

The goal of deterrence theory is not to eliminate all risky activity. Some level of risky activity is acceptable in our society because some activities, such as driving automobiles and erecting buildings, produce great benefits for society.<sup>8</sup> According to economic theory, it is efficient to engage in risky activities as long as the benefits derived from those activities are greater than the accompanying costs.<sup>9</sup> In other words, the producer of risky activities should minimize the total costs, including expected costs of accidents and

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6. See, e.g., *Waits v. United States*, 611 F.2d 550, 551, 553 (5th Cir. 1980) (affirming damages award based upon amputation of leg); *White v. Mitchell*, 263 Ark. 787, 822, 568 S.W.2d 216, 225 (1978) (en banc) (damages award for amputation of leg); *Skaug v. Johnson*, 330 N.E.2d 265, 269, 29 Ill. App. 3d 238, 243 (1975) (affirming damages award based partially upon hearing loss); *Wilson v. Kurn*, 183 S.W.2d 553, 556-57 (Mo. 1944) (affirming damages award based upon physical disfigurement from amputation of arm).

7. See Fuchs & Zeckhauser, *Valuing Health—A "Priceless" Commodity*, 77 AM. ECON. REV. 263, 265 (1987) ("life may be priceless . . . in the sense that there is no monetary amount that an individual would accept to give up his life").

8. See Zeckhauser, *Measuring Risks and Benefits of Food Safety Decisions*, 38 VAND. L. REV. 539, 545 (1985) (describing some of the risks we accept because the cost of further protecting our lives is not worth the sacrifice required). Some "risky technologies may be (net) risk reducing, i.e., they may eliminate a greater quantum of risk than they create." C. GILLETTE & T. HOPKINS, *FEDERAL AGENCY VALUATIONS OF HUMAN LIFE: A REPORT TO THE ADMINISTRATIVE CONFERENCE OF THE UNITED STATES* 26 (1988). For example, suppose there is a small risk that an individual who receives a DTP vaccination will die from injection of the bacteria into the blood stream. At the same time, however, the vaccination greatly reduces the risk of dying from contracting one of the deadly communicable diseases that the vaccination was developed to prevent. Other risky technologies "may possess other compensating features, e.g., convenience, that offset the risks they pose." *Id.*; cf. Feinberg, *Voluntary Euthanasia and the Inalienable Right to Life*, 7 PHIL. & PUB. AFF. 93, 98 (1978) ("it seems very doubtful that the right to life, as it is normally understood, can be absolute"; other interests will occasionally predominate).

9. Zeckhauser explains that an individual's assessment of the benefits of a risky activity contributes to his determination of whether to expose himself to the risk; on icy mornings many people are willing to drive downtown to get to work, but not merely to pick up a candy bar. Zeckhauser, *supra* note 8, at 573; cf. R. LIPSEY, P. STEINER & D. PURVIS, *ECONOMICS* 450 (8th ed. 1987) (government program is cost-effective when benefits exceed costs).

costs of preventing injuries.<sup>10</sup>

Tort law can be used to help society reach an efficient level of risk-imposing activities. Without tort liability rules, a potential tortfeasor would not adequately consider the negative externalities<sup>11</sup> he would impose on others by engaging in a particular activity. By underestimating the costs associated with his activity, he would overproduce the risky activity or underinvest in safety measures designed to reduce the risk of injury.<sup>12</sup> If, on the other hand, a liability rule charges a tortfeasor an amount equal to the cost of an injury or death whenever he overproduces risky activity or underinvests in precautions, he is forced to internalize these costs. If potential tortfeasors know that they will be held liable for all the costs they negligently impose upon society by engaging in an activity, they will choose an approximately efficient bundle<sup>13</sup> of risky activity and safety measures.<sup>14</sup>

A tortfeasor imposes several different costs upon society when his activities take the life of an innocent victim. First are losses to people other than the victim. The decedent's family loses the income the victim would have earned and used to support them had he survived. Moreover, the victim's friends and loved ones no longer enjoy the decedent's companionship. Society imposes many of these costs upon the tortfeasor because family members can

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10. Cf. R. LIPSEY, P. STEINER & D. PURVIS, *supra* note 9, at 908 (defining economic efficiency as "the least costly method of producing any output").

11. In this context, negative externalities are the increased risk of death or injury to potential victims. For a discussion of the problem of externalities, see C. GOETZ, *CASES AND MATERIALS ON LAW AND ECONOMICS* 18-19 (1984).

12. See Note, *An Economic Analysis of Tort Damages for Wrongful Death*, 60 N.Y.U. L. REV. 1113, 1116-17 (1985) (by J. Arlen) (too many accidents will result if the prevailing damages rule does not require tortfeasors' to pay for all the costs they impose on others).

13. The potential tortfeasor may not choose a perfectly efficient bundle because of litigation and error costs. As Judge Posner has observed, "[t]he defendant's expected loss is the judgment if he loses discounted by his estimate of the probability of losing . . . plus his litigation costs." R. POSNER, *supra* note 3, at 523. He will expect to incur some litigation costs in resolving claims brought by plaintiffs. If a potential tortfeasor expects high litigation costs, he will have an incentive to reduce the risks of an accident by spending more on safety precautions. However, he will also anticipate that there will be instances in which no claim is brought even though he was negligent. If so, he will have an incentive to spend less than the efficient amount on safety. Error costs will result if he is held liable when he was in fact not negligent. However, a court or jury could also mistakenly think he was not negligent when he actually was negligent.

If a potential tortfeasor is risk averse, he will be willing to spend more time and money taking care than is efficient because the possibility of large litigation and liability costs presents an additional source of discomfort, or disutility. For a discussion of risk aversion, see C. GOETZ, *supra* note 11, at 79-82. It is therefore ambiguous whether a potential tortfeasor will spend more or less than the efficient amount on safety measures and risky activities.

14. Of course, the textual statement assumes that an individual will be deemed negligent at the point at which the marginal costs of additional prevention are less than the marginal costs of additional injury. Under a strict liability regime, the injurer will always choose an approximately efficient bundle of risky activity and safety measures so long as he is forced to internalize all of the costs of injury.

generally recover for their losses in a wrongful death action.<sup>15</sup> Nonfamily members, however, usually cannot recover for their losses.<sup>16</sup> Presumably, this refusal to allow recovery is justified because the losses nonfamily members have suffered are small relative to the increased litigation costs associated with allowing everyone with a loss to bring suit.<sup>17</sup>

The second category of costs are those suffered by the victim. The victim loses the income he would have earned during the rest of his lifetime along with the consumer surplus<sup>18</sup> that would have resulted from purchasing goods and services with the lost income. If the victim is not killed instantly, he may experience pain, suffering, and mental anguish. He may also incur medical or other injury-related expenses. The most significant cost imposed upon the victim may be the loss of his ability to enjoy the rest of his life. It is with respect to the losses suffered by the victim that our tort system does a particularly poor job of forcing tortfeasors to internalize all the costs of their activities.

In a wrongful death suit, the damages for which the tortfeasor may be held liable vary depending upon which state's law applies to the tort. Many states allow recovery only for the injury and deny recovery for economic losses stemming from the death.<sup>19</sup> In these states, damages awards usually include

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15. See W. PROSSER & W. KEETON, *THE LAW OF TORTS* § 127, at 947 (5th ed. 1984) (permissible beneficiaries are usually family members who might have expected to receive support or assistance from the deceased if he had lived, including husband, wife, parent, or child). There has been a recent trend to allow survivors to recover for intangible losses and bereavement. *Id.* § 127, at 953. For a discussion of recoverable losses upon the tortious death of an Englishwoman, see Clarke & Ogus, *What Is A Wife Worth?*, 5 J.L. & SOC'Y 1, 8-10, 14-25 (1986) (discussing compensability of lost financial support, housekeeping services, emotional support, moral care and guidance, and pain and suffering consequent to bereavement).

16. See W. PROSSER, *HANDBOOK OF THE LAW OF TORTS* § 103, at 960-61 (1941) (listing individuals who cannot bring a cause of action for wrongful death).

17. This explanation would not, however, adequately explain why live-in lovers or wholly dependent brothers and sisters are not able to bring a cause of action. See W. PROSSER & W. KEETON, *supra* note 15, § 127, at 947-48 (mentioning loved ones who are not able to recover in wrongful death actions and noting that the distinctions are problematic).

18. The consumer surplus is "the difference between the total value consumers place on all units consumed of a commodity and the payment they must make to purchase the same amount of the commodity." R. LIPSEY, P. STEINER & D. PURVIS, *supra* note 9, at 906. For example, suppose Ann decides as she is passing by her neighborhood convenience store that she would enjoy eating a candy bar. In fact, Ann would value the consumption of that candy bar at 75 cents. To her delight, she finds that candy bars are presently on sale for 35 cents each. If she purchases and consumes one candy bar, Ann will enjoy a consumer surplus of 40 cents. For a more detailed discussion of consumer surplus, see *id.* at 134-36; J. HIRSHLEIFER, *PRICE THEORY AND APPLICATIONS* 218-21 (3d ed. 1984).

19. See *Barcus v. Union Hosp. Ass'n*, 14 Ohio Misc. 168, 169, 236 N.E.2d 232, 234 (1965) (recovery is limited to damages for injuries accrued during the decedent's lifetime and does not include damages for death, funeral expenses, or medical expenses unless they were actually paid by the decedent from his own funds or a contract obliged the decedent to pay them); *cf.* *Stephens v. Brown*, 160 Mont. 453, 459, 503 P.2d 667, 670 (1972) (no damages are recoverable if injury leads to instantaneous death, because there are no medical expenses, pain and suffering, or lost wages).

conscious pain and suffering,<sup>20</sup> medical expenses,<sup>21</sup> injury to property,<sup>22</sup> and lost earnings sustained between the time of injury and death.<sup>23</sup> In states recognizing economic losses resulting from the death, the decedent's estate is generally allowed to recover for funeral expenses<sup>24</sup> and net loss of future income.<sup>25</sup> Almost without exception, however, the tortfeasor is not held liable for depriving the victim of the enjoyment of life.<sup>26</sup> Therefore, this particular cost of the tortfeasor's activity remains an externality. By not forcing

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20. See, e.g., *Murphy v. Martin Oil Co.*, 56 Ill. 2d 423, 431, 308 N.E.2d 583, 587 (1974); *Gaudette v. Webb*, 362 Mass. 60, 62, 284 N.E.2d 222, 225 (1972); *Gabrish v. Morse*, 361 Mich. 39, 43-44, 104 N.W.2d 757, 759 (1960); see also *Lanzet v. Greenberg*, 222 N.J. Super. 540, 543, 537 A.2d 742, 744 (1988) (disability and impairment of life are recoverable damages, even though decedent remained in chronic vegetative state). But see *Estate of Burron v. Edwards*, 42 Colo. App. 141, 142, 594 P.2d 1064, 1065 (1979) (damages for pain, suffering, and disfigurement not allowed).

21. See, e.g., *Soares v. McClosky*, 466 F. Supp. 703, 708 (E.D. Pa. 1979); *Estate of Burron*, 42 Colo. App. at 142, 594 P.2d at 1065; *Sheets v. Graco, Inc.*, 292 N.W.2d 63, 67 (N.D. 1980).

22. See, e.g., *Murphy*, 56 Ill. 2d at 431, 308 N.E.2d at 587; *Martinez v. Angerstein*, 517 S.W.2d 811, 815-16 (Tex. Civ. App. 1974).

23. See, e.g., *Estate of Burron*, 42 Colo. App. at 142, 594 P.2d at 1065; *Greene v. Texiera*, 54 Haw. 231, 235-36, 505 P.2d 1169, 1172 (1973); *Murphy*, 56 Ill.2d at 431, 308 N.E. 2d at 587; *Sheets*, 292 N.W.2d at 67.

24. See, e.g., *Sheets*, 292 N.W.2d at 67; *Martinez*, 517 S.W.2d at 815-16.

25. See, e.g., *Loden v. Getty Oil Co.*, 359 A.2d 161, 163 (Del. 1976); *Hughes v. Pender*, 391 A.2d 259, 261 (D.C. 1978); *Balmer v. Dilley*, 81 Wash. 2d 367, 371, 502 P.2d 456, 458-59 (1972) (en banc). To determine the net loss of future income, a court measures the loss of future income and then subtracts the decedent's living expenses had he survived. See *Soares*, 466 F. Supp. at 708 (holding that the decedent was entitled to recover the difference between decedent's gross expected lifetime earnings and the lifetime expenditures required for his own support and the support of his dependents, all reduced to present value).

26. See *Bass v. Wallenstein*, 769 F.2d 1173, 1189 (7th Cir. 1985) (dictum) (Illinois statutory scheme does not allow for recovery "on the decedent's behalf for the loss of life itself"); *Bell v. City of Milwaukee*, 746 F.2d 1205, 1235-36 (7th Cir. 1984) (dictum) (Wisconsin wrongful death statute does not permit recovery of "damages for the loss of life itself"); *Missouri Pac. R.R. v. Lane*, 720 S.W.2d 830, 834 (Tex. Ct. App. 1986) ("loss of enjoyment of life may not be claimed as a separate element of damages" in a wrongful death action).

The notable recent exception is *Sherrod v. Berry*, 629 F. Supp. 159, 162-64 (N.D. Ill. 1985), in which the court allowed an economist to testify as an expert witness concerning the hedonic value of the life of a young man who was needlessly killed by a police officer. The Seventh Circuit affirmed, 827 F.2d 195, 205-06 (7th Cir. 1987), *rev'd on other grounds*, 856 F.2d 802 (7th Cir. 1988) (en banc). However, nearly every case, including *Sherrod*, that has recognized a hedonic value of human life in ascertaining wrongful death damages has done so in the context of a § 1983 federal tort claim rather than a common law or state wrongful death action. See *Bass*, 769 F.2d at 1187-90 (holding that although state law did not permit recovery for loss of life itself, policy of § 1983 to deter unconstitutional deprivation of life mandated a recovery); *Bell*, 746 F.2d at 1234-41 (same); *Guyton v. Phillips*, 532 F. Supp. 1154, 1164-68 (N.D. Cal. 1981) (estate can recover for unconstitutional deprivation of right to life). But see *Espinoza v. O'Dell*, 633 P.2d 455, 465-66 (Colo. 1981) (in § 1983 action, personal representative of decedent limited to recovery under state survival statute, although surviving children allowed to recover for more than state statute provides them).

Only Connecticut has allowed hedonic damages in state law actions for injuries resulting in death. See *Estate of Katsetos v. Nolan*, 170 Conn. 637, 657, 368 A.2d 172, 183 (1976) (recoverable damages "include (1) the value of the decedent's lost earning capacity less deductions for her necessary living expenses and taking into consideration that a present cash payment will be made, (2) compensation for the destruction of her capacity to carry on and enjoy life's activities in a way she

potential tortfeasors to internalize hedonic losses,<sup>27</sup> society may be creating incentives for potential tortfeasors to engage in too much risky activity or take too few safety precautions.<sup>28</sup>

Paradoxically, hedonic damages may be the only clearly identifiable loss resulting from John Doe's premature death in the airplane hypothetical. Because he was unemployable, he lost no wages. He experienced no pain and suffering and incurred no medical expenses. Moreover, if his body could not be recovered, his estate would incur no burial costs. However, John Doe was denied the value of his future years of life—a loss that, aside from lost wages, is generally not recoverable. Because society will not hold Aerodynamic Engines liable for hedonic damages, this loss will provide no additional incentive for Aerodynamic to take steps to prevent future accidents.

## II. VALUING LIFE

Once courts decide that hedonic damages awards are necessary to deter potential tortfeasors, they will face a difficult question—how to calculate the awards. Economists have sought to measure how much it would be worth to save a life from the perspective of those whose lives stand to be lost. This section explores the two methods devised by economists, the human capital and willingness to pay approaches. It concludes that courts should use the latter to calculate the value of human life.

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would have done had she lived, and (3) compensation for conscious pain and suffering" (emphasis added) (footnote and citations omitted)).

27. By "hedonic damages awards," I mean that element of damages relating to loss of enjoyment of life or loss of life expectancy. I do not mean to suggest this should be the only item of damages recoverable in the decedent's name. If, for example, the injury that caused death also imposed extensive pain and suffering on the decedent prior to death, those damages should also be recoverable. If the tortfeasor is held liable for pain and suffering, he will have a greater incentive to refrain from activities that impose a risk of great pain and long-term suffering before death. As one commentator has stated, "deaths involving considerable prolonged pain and impairment of capacities are in general less desirable than deaths without such suffering." Fried, *The Value of Life*, 82 HARV. L. REV. 1415, 1433 (1969); cf. C. GILLETTE & T. HOPKINS, *supra* note 8, at 31 ("Avoidance of cancer deaths might warrant expenditure of more resources than avoidance of an equal number of deaths in automobile accidents, simply because we dread the painful and extended deterioration that accompanies the former.").

28. It should be pointed out that although there are alternative means of forcing tortfeasors to internalize the costs of their negligent activities, none will be as effective as hedonic damages. Society could simply rely on the presence of other passengers on board the plane to impose costs on the tortfeasor, but because none of them can recover for their lost enjoyment of life, tortfeasors will still take inefficiently low levels of care. Society could impose additional liability by awarding punitive damages. However, punitive damages are a blunt instrument with which to create incentives because without a systematic method of fixing them, there is a risk of both underdeterrence and overdeterrence. Finally, society could impose criminal liability on tortfeasors, but this too is a blunt instrument. Because two individuals will place different values on the disutility of a given prison term, it would be virtually impossible to fix prison terms so that the appropriate incentives result.



## A. HUMAN CAPITAL APPROACH

The first method, sometimes referred to as the human capital approach,<sup>29</sup> attempts to place a value on an individual's life based on what he would have earned in the marketplace had he lived.<sup>30</sup> It therefore equates the value of life with expected lifetime earnings discounted to present value.<sup>31</sup> This method has been largely rejected,<sup>32</sup> in part because most people do not consider production an end in itself.<sup>33</sup> Most people spend only as much time producing in the marketplace as is necessary to acquire the money to enjoy life's pleasures.<sup>34</sup> Therefore, future income is an inadequate proxy for the lost value of a decedent's life. It includes neither the value to the decedent of certain nonmarket activities nor the consumer surplus that would have resulted from spending that income.

29. For discussions of the human capital approach, see generally C. GILLETTE & T. HOPKINS, *supra* note 8, at 32-38; Mishan, *Evaluation of Life and Limb: A Theoretical Approach*, 79 J. POL. ECON. 687 (1971); Viscusi, *The Valuations of Risk to Life and Health: Guidelines for Policy Analysis*, in *BENEFITS ASSESSMENT: THE STATE OF THE ART* 193, 198 (1986).

30. See C. GILLETTE & T. HOPKINS, *supra* note 8, at 32. Gillette and Hopkins describe the human capital approach in the following manner:

Premature destruction of a productive machine would deprive society of whatever output it was capable of yielding over its remaining years of usefulness. The human capital approach relies on an analogy between such productive physical capital and the economic productivity of people and equates the value of life with the dollar value of goods that can be produced by the person whose life is at risk. In particular, one can estimate the amount of future income that will be foregone [sic] if a person's productive effort comes to an early end due to death.

*Id.*

31. When economists "discount to present value," they take into account that if a person receives a dollar today, she can invest that dollar and earn interest on it. Thus, a dollar today is worth more than a dollar a year from now because the dollar today will have earned interest in a year. When they calculate lifetime earnings today, economists adjust the lifetime earnings downward so that if that sum of money were invested today, at the end of the expected lifetime it would be equivalent to the lifetime earnings if they were received as they were earned. For a discussion of present values, see C. GOETZ, *supra* note 11, at 157-60.

32. See, e.g., C. GILLETTE & T. HOPKINS, *supra* note 8, at 33-38 (human capital approach introduces "ethically troublesome implications" and "neglects everything but future individual productivity"); Arthur, *The Economics of Risks to Life*, 71 AM. ECON. REV. 54, 54 (1981) (human capital approach "is founded at best on thin logic"); Mishan, *supra* note 29, at 689-90 (human capital approach is regarded by some as "absurd" and "dangerous" and without "regard for the feelings of the potential decedents").

33. See Acton, *Measuring the Monetary Value of Lifesaving Programs*, 40 LAW & CONTEMP. PROBS. 46, 53 (1976) ("If one accepts the view that production is not an end in itself for people, but rather a necessary intermediate step which allows people to enjoy the fruits of production, then the 'human capital' approach is clearly inappropriate."). The human capital approach has many other flaws, including: (1) it assigns a negative value of life to an individual who has a negative income; (2) it is restricted to the interests of the surviving members of society and ignores the decedent; and (3) it cannot take into account variables that are hard to quantify. See C. GILLETTE & T. HOPKINS, *supra* note 8, at 33-38; Mishan, *supra* note 29, at 689-90.

34. See Acton, *supra* note 33, at 53.

For example, suppose Abe could earn one million dollars per year working on Wall Street, but instead chooses to live in Hawaii where he can watch beautiful sunsets. Abe also loves to surf, and he values surfboards highly—much higher than their actual prices. He finds a minimum wage job and works thirty hours every week, which is just enough to provide him with shelter, food, clothing, and surfboards. Although we do not know how highly Abe values his life, we do know that the value he places on surfing and Hawaiian sunsets is at least as great as the difference between what he would have earned on Wall Street and what he earns in Hawaii. Otherwise, he would not have chosen to be in Hawaii rather than New York.

Under the human capital approach, if a surfboard manufacturer negligently causes Abe to die instantaneously and without pain, Abe's estate will probably be able to recover only the present value of Abe's future income. This damages award will not include costs that are not reflected in Abe's lost future income. First, it will not include the value Abe placed on being in Hawaii. This value existed separately from Abe's income because Abe had to forgo Wall Street wages to live in Hawaii. Second, the damages award will not include the value Abe placed on enjoying more sunsets and surfing. This value is reflected in the forgone extra income Abe could have received in Hawaii by working a few more hours every week.<sup>35</sup> Finally, the damages award will not include the consumer surplus Abe receives from purchasing surfboards. The consumer surplus exists because Abe subjectively values his surfboards at an amount much higher than the price he paid for them. In short, under the human capital approach, the surfboard manufacturer will not be held liable for all the costs resulting from its negligent activity. Therefore, this approach will not provide the proper incentive for the surfboard manufacturer to increase the safety of its surfboard.

Although the human capital approach is not the appropriate measure of the costs to the decedent, it may be a basis for measuring the extra income that the individual would have contributed to his family's well being. Additionally, an individual's future income may be a proxy for the value that society placed upon that individual's productive capacity.<sup>36</sup> The human capital approach does not, however, come close to the valuation we are seeking

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35. Economists refer to this as an "opportunity cost." Because time is a scarce "good," engaging in one activity necessarily precludes engaging in some other activity during that period of time. If the opportunity cost of engaging in some activity is greater than the benefits derived from engaging in that activity, we would expect an individual to decide not to engage in that activity. For a general discussion of opportunity costs, see Rhoads, *Kind Hearts and Opportunity Costs*, ACROSS THE BOARD, Dec. 1985, at 40.

36. In a perfectly competitive market, the individual's wage rate would be equivalent to the value society placed on his last unit of labor. See R. BARRO, *MACROECONOMICS* 221-23 (1984) (a producer will choose a quantity of labor input such that the "marginal product [of labor] equals the real wage rate").

to discover—a true valuation of the individual's life.<sup>37</sup> Our friend Abe might be willing to forgo a few Hawaiian sunsets to prolong his life. He might even be willing to obtain a job on Wall Street to finance a heart transplant. In short, he himself might have been willing to invest more than his future earnings to avoid life-threatening risk. And if Abe would have valued his life at more than his future earnings, so should society.

Perhaps we could more accurately value human life by measuring the individual's *potential* future income rather than by calculating his *projected* future income.<sup>38</sup> For example, because Abe's potential future income is one million dollars per year multiplied by the probability of his being alive in any given year, this measure accounts at least in part for the value of Abe's surfing and sunsets. We could conclude that the value of Abe's present earnings stream plus his surfing and sunsets are worth at least one million dollars per year to Abe because if they were worth less to him, he would be on Wall Street. However, this is probably not an accurate valuation of Abe's life. First, it is possible that Abe subjectively values living in Hawaii at much more than a million dollars. If so, one million dollars would be an undervaluation. Moreover, it is also possible that Abe dislikes New York so much that living there would be a disutility to him. If so, one million dollars would be an overvaluation.<sup>39</sup> Because a potential future income measure takes into account neither the utilities nor the disutilities associated with an individual's life, it cannot value a life accurately.

Even more problematic is the value of life this method of calculation finds for Abe's friend Bert. Abe and Bert work at the same establishment and surf and watch sunsets together every day. In fact, they both derive the same utility from surfing and watching sunsets. Abe and Bert are both twenty-seven years old and both are in good health. Unlike Abe, Bert is of below-average intelligence and has a lower capacity than Abe to develop employable skills. Therefore, his potential income is only \$100 per week. If we estimate the value of life by measuring Abe's and Bert's respective earning capacities, Abe's life is almost 200 times more valuable than Bert's. This is hard to believe, and to stomach, especially when both place the same value on life's pleasures.

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37. See generally Conley, *The Value of Human Life in the Demand for Safety*, 66 AM. ECON. REV. 45 (1976) (arguing that the value of an individual's life is generally greater than discounted lifetime earnings).

38. Indeed, one economist has indicated to me that the original conception of "human capital" referred to an individual's capacity to earn rather than his actual earnings. Interview with David Gordon, in Washington, D.C. (Mar. 20, 1989).

39. Suppose that if Abe lived in New York, he would be so miserable that he would be willing to pay \$200,000 to live anywhere else. The value of his life in New York would be \$800,000 (\$1,000,000 minus \$200,000). If the value of Abe's present earnings stream plus his surfing and sunsets in Hawaii were \$810,000 to him, he would still choose to live in Hawaii. If so, by assuming that living in Hawaii is worth one million dollars to Abe, we are overvaluing Abe's life.

Because neither branch of the human capital approach adequately considers those elements of the value of life which are not reflected in an individual's income, it cannot produce a comprehensive measure of hedonic damages. The human capital approach should therefore not be used to measure hedonic damages awards if a better approach is available.

#### B. WILLINGNESS TO PAY APPROACH

In contrast to the human capital approach, which simply aggregates a person's future income stream, the willingness to pay approach attempts to determine the subjective value each individual places on his life. It begins with the assumption that we can find a monetary equivalent to the value a person places on a market good by observing what he would pay to purchase the good or, conversely, how much he would demand to relinquish the good.<sup>40</sup> Because there are no markets in which people barter their lives,<sup>41</sup> economists observe market behavior with respect to particular risks of death. Therefore, to find a monetary equivalent for the value a person places on his life, economists observe what he is willing to pay for market goods that will slightly reduce his risk of dying prematurely.<sup>42</sup>

Conceptually, the willingness to pay method can be described as follows. Suppose Calvin is just willing to pay \$100 to purchase an automobile air bag that will eliminate the possibility that he will die in a low-speed auto collision. Suppose further that by installing the air bag, the probability of his dying will be reduced by .0001. We could calculate a "valuation" of Calvin's life by multiplying the \$100 demand price by 1/.0001 (the risk in this example). The resulting valuation would equal one million dollars. Conversely, if Calvin were to accept a .0001 increase in risk of death, economists would expect him to demand \$100 from the person imposing that risk upon him.<sup>43</sup> Once economists ascertain a demand price for a given increase or decrease in risk, they assume the individual has linear preferences. Thus, they assume

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40. See T. SCHELLING, CHOICE AND CONSEQUENCE 127 (1984) (one way to determine whether benefits exceed costs is to "use the price system as a test of what something is worth to the people who have to pay for it").

41. See Zeckhauser & Shepard, *Where Now For Saving Lives?*, 40 LAW & CONTEMP. PROBS. 5, 5 (1976) (noting the difficulty of determining life's worth because, *inter alia*, "lives are not bartered on markets" and "there is only the slightest degree of standardization for lives").

42. See C. GILLETTE & T. HOPKINS, *supra* note 8, at 39 ("researchers have seized on a theory of valuing life by determining what individuals would be willing to pay in order to reduce the probability of death or what they would accept to have that probability increased").

One reason for these studies is a belief that society should not spend more money to reduce an individual's risk of death than the individual would deem it worth to have that risk reduced. See T. SCHELLING, *supra* note 40, at 127 (suggesting that money should not be spent to reduce a risk if the persons put at risk would "prefer to have the money or some alternative benefits that the money could buy"); Zeckhauser, *supra* note 8, at 545 ("The central tenet of cost-benefit analysis is that the consumer should pay for something no more than what it is worth.").

43. For similar descriptions of the general methodology of the willingness to pay approach, see

that Calvin would pay \$200 to eliminate a risk of death that is exactly twice as great as the risk of dying in a low-speed auto collision.

The advantage of the willingness to pay method over the human capital approach is that under the former, the individuals involved internalize soft variables,<sup>44</sup> which include their subjective preferences concerning life and death, and they express a monetized value for these variables.<sup>45</sup> For example, suppose we ask Abe and Bert to consider purchasing one of two microwave ovens. The two ovens are identical except that the first has an extra feature which completely prevents the emission of cancer-producing waves. In contrast, the second oven carries a small risk of death. We want to know how much more Abe and Bert are willing to pay to purchase the first oven than they are to purchase the second oven. Each will implicitly consider the value he places on surfing and sunsets in determining his willingness to avoid incurring the risk of death. Each will also consider his degree of anxiety regarding the possibility of dying from cancer. We would expect Abe and Bert to pay more to avoid a risk of dying a slow and painful death from cancer than they would to avoid a risk of instant death. We can thus ascertain a value for risking the intangible aspects of life and death,<sup>46</sup> a value that would not be included in a damages award based on lost future earnings.

One criticism of the willingness to pay approach questions its basic assumption that individuals will demand the same amount of money to incur each additional increment of risk. In other words, the willingness to pay method assumes that if I demand \$1000 to incur a one percent increase in my risk of death, I would require \$50,000 to incur a fifty percent increase in my risk of death, and \$100,000 to incur a certainty of death. Because it is unlikely that I would agree to forfeit my life in exchange for any finite amount of money, many commentators believe the assumption of linear preferences that underlies this approach is unrealistic.<sup>47</sup> However, this assumption of

C. GILLETTE & T. HOPKINS, *supra* note 8, at 39-40; Dardis, *The Value of a Life: New Evidence From the Marketplace*, 70 AM. ECON. REV. 1077, 1078-79 (1980).

The amount an individual is willing to pay to eliminate a risk of premature death ( $A$ ) is equal to the individual's value of life ( $V$ ) multiplied by the probability of premature death that the risk represents ( $P$ ). If we rearrange the equation,  $V = A/P$ . Thus, we can calculate a value of life by taking the amount the individual is willing to pay to eliminate the risk of death and dividing it by the probability of death that the risk represents.

44. Professor Tribe originated the term "soft variables" in *Trial by Mathematics: Precision and Ritual in the Legal Process*, 84 HARV. L. REV. 1329, 1361-65 (1971) (arguing that quantitative decisionmaking techniques are likely to dwarf soft variables, or bias conclusions in the direction of the objective considerations they can most readily incorporate).

45. C. GILLETTE & T. HOPKINS, *supra* note 8, at 39.

46. *See id.* (the type of death that the individual will suffer should a risk materialize is one of the soft variables that are internalized).

47. *See, e.g.*, Linneroth, *The Value of Human Life: A Review of the Models*, 17 ECON. INQUIRY 52, 55 (1979) (noting non-linearity of indifference functions); Machol, *How Much Safety?*, 16 INTERFACES 50, 54 (1986) (attacking the assumption that people's utility functions are linear);

linear preferences is not fatal for the valuation of hedonic damages proposed by this note. Recall that this proposal seeks to place a value on human life only as a means to create *ex ante* incentives for potential tortfeasors to take optimal care. It does not consider situations in which tortfeasors are imposing a risk of certain death; rather, their activities or products impose only small risks of death.

The willingness to pay approach is an efficient method for providing potential tortfeasors with *ex ante* incentives to take appropriate levels of care. Consider an alternative approach to creating efficient *ex ante* incentives.<sup>48</sup> We could guarantee that a potential tortfeasor will internalize the costs associated with the risk he imposes if we require him to obtain the written consent of each potential victim before he engages in a risky activity. The price that the tortfeasor would have to pay to induce an individual to incur the risk would include expected costs of pain and suffering and death should the risk materialize. However, this alternative is impracticable because of holdout problems<sup>49</sup> and the transaction costs<sup>50</sup> of identifying and bargaining with each risk bearer.

We can create the same incentives if instead we charge tortfeasors *ex post* for the value of life lost, measured by the willingness to pay approach. Assume for the moment that courts implement the damages measure proposed in this note. One consequence will be that the price of risky activities will rise. The cost of constructing buildings, for example, will increase as construction companies pass on their increased liability costs to building purchasers. Notice that the builder has an incentive to modify his building practices so that it is safer for pedestrians to pass by the construction area if the costs of modification are less than the benefits. If he does so, he becomes

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Zeckhauser, *supra* note 8, at 560 (“[C]onversion of small risks . . . into a certainty number is fundamentally misleading.”).

48. The following argument is outlined in more detail in Cohen, *Toward an Economic Theory of the Measurement of Damages in a Wrongful Death Action*, 34 EMORY L.J. 295, 314-19 (1985). Cohen attempts to incorporate the price of risk into wrongful death awards, but, incomprehensibly, he ultimately calls for its incorporation through an award of some multiple of the present value of lifetime income. *Id.* at 324. In addition, Cohen asserts that his proposal is just according to the compensation rationale of tort law. *See id.* at 312 (“It is eminently just and sensible that this quintessential loss by the decedent should be compensated.”). He fails to recognize that compensation is not required in the wrongful death context and indeed is not possible.

49. Holdout problems occur when individuals perceive a benefit from stubborn bargaining or extortion. For example, if Abe knows that a tortfeasor has a large financial stake in getting the people he puts at risk to assent to that risk, he may attempt to “hold out” by asking for a sum of money greatly in excess of what he would subjectively demand. This will impede bargaining to the extent that each of the others put at risk also demands a very high sum. For a general discussion of this type of strategic behavior in the context of entitlements, see A. POLINSKY, AN INTRODUCTION TO LAW AND ECONOMICS 18-20 (1983).

50. As Polinsky has explained, “[i]n general, transaction costs include the costs of identifying the parties with whom one has to bargain, the costs of getting together with them, the costs of the bargaining process itself, and the costs of enforcing any bargain reached.” *Id.* at 12.

a more effective competitor because he is able to lower the price of his construction bids. Even if lowering his bids is not necessary for effective competition, he will reap greater profits by implementing cost-effective safety measures. In other words, he will take the optimal amount of safety precautions.

To value a life under the willingness to pay approach, we rely on individuals to quantify the value to them of reducing their risk of death. For this reason, the approach provides an accurate measure of the benefits of safer practices. The builder's reduced liability costs will equal the value to the potential victims of their reduced risk of death. Thus, by incorporating the willingness to pay approach into wrongful death damages awards, society will obtain the same level of safety in building construction as if we were to require builders to obtain the written consent of the pedestrians. Unlike the "bargaining model," however, the willingness to pay approach is not plagued by holdout problems or severe transaction costs. The willingness to pay approach in effect creates a market for safety akin to the market for safety in consumer products. In short, the willingness to pay approach's assumption of linear preferences actually helps us create efficient incentives by pricing risks directly.

### III. DAMAGES AWARDS UNDER THE WILLINGNESS TO PAY APPROACH

For optimal deterrence, we would want to award an amount equivalent to the subjective value the decedent placed upon his own life. However, the litigation costs of determining the value a decedent placed on his own life would probably be large—so large, in fact, that this is not a practicable alternative.<sup>51</sup> And even if we were willing to spend large sums of money and long periods of time arriving at a value, we could never know for certain the precise value for any individual.

This problem can be avoided, however. Because deterrence, rather than compensation, is our objective, hedonic damages awards should be equivalent to the average value of life for the population that the tortfeasor put at risk. By using this method, we would create the right incentives for potential tortfeasors without having to discover any particular individual's preferences. Moreover, when two deaths are caused by the same event, this method would avoid the implication that one victim's life was worth more than the other's. Thus, the best practicable way to incorporate the willingness to pay approach into wrongful death damages is to award an amount equivalent to the average life valuation of the population that the tortfeasor put at risk.

To determine the average value, the court should first identify the popula-

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51. See *infra* text accompanying notes 73-75.

tion put at risk as well as the common characteristics of the members of that population. Second, it should determine how much the members of the population tend to pay to reduce their risks of death and then arrive at an average value. Finally, the court should calculate a value of life using the willingness to pay method as described in Part II.B.

A few illustrations of the population put at risk are in order. If commercial airplane engines are negligently manufactured, then the population put at risk is composed of those individuals who take advantage of air transportation. If a pharmaceutical company puts a toxic substance in birth control pills, then the population put at risk is composed of women between the approximate ages of eleven and fifty. If a drunk driver speeds through the streets of a retirement community, then the population put at risk is predominantly composed of elderly individuals.

Once the court defines the population put at risk, it should ascertain, to the extent possible, those characteristics that are common to the members of that group. This is necessary because sometimes there will be reasons to award disparate sums for cases in which different populations are put at risk.<sup>52</sup> For example, if a manufacturer negligently produces faulty pacemakers, the value of life of a twenty year old is probably irrelevant because most people who use pacemakers are much older. When an elderly individual dies prematurely, we would predict that he was deprived of fewer years than a young person would have been. Thus, the value of his loss may be smaller than the value of a twenty year old's loss.<sup>53</sup> If we included the value of life of a twenty year old in the average value of life for the population put at risk, we would increase the damages award and therefore create an incentive for the manufacturer to take excessive care in the future. This excessive care would result in pacemakers priced higher than the average elderly person would be willing to pay.

To illustrate more precisely the determination of the relevant population's common characteristics, consider the case of negligently manufactured commercial airplane engines. Air travellers tend to enjoy higher incomes than

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52. This justification of disparate awards is also the reason for not simply determining the value of life of the average United States citizen. In other words, when we wish to create different incentives for tortfeasors dealing with different populations, a valuation for the average U.S. citizen will fail to create the different incentives. Some potential tortfeasors will take too many precautions while others will take too few.

53. On the other hand, elderly people are often more risk averse than are younger individuals. See *infra* note 104 and accompanying text. For example, violent crimes are generally committed by younger individuals. See T. SOWELL, *ETHNIC AMERICA* 8 (1981) ("most violent crime is committed by males under twenty-five"). Older individuals drive much slower on average than younger individuals. Personal observation of daily traffic on North Capitol street, in Washington, D.C. (July 1987 to Mar. 1990). Therefore, each year left to an elderly individual may be more precious to him than each year left to a young person. The point is that courts must be careful both in defining the population put at risk and in assessing systematic variations in risk valuations.



bus passengers. Assume for the sake of exposition that the court determines that air travellers generally have annual incomes greater than \$20,000. In addition, many elderly individuals are reluctant to use air travel. For now, assume that, according to the court, airline passengers generally range in age from fifteen to sixty years. Finally, assume for the sake of exposition that seventy percent of air travellers are male and the remaining thirty percent are female.

Once the court determines the common characteristics of the relevant population, it must determine what value individuals with these characteristics tend to place on given increases or decreases in their risk of premature death. It can best do this by observing their purchases of other market goods that affect their risks of death. To find a valuation, the court should begin with economists' studies that derive implicit valuations from consumption and job selection.<sup>54</sup> For example, economists have studied what consumers are willing to pay for smoke detectors<sup>55</sup> and the risk premium that workers demand

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54. However, we should not seek to derive an implicit valuation of life by examining consumers' willingness to purchase life insurance policies. If an individual purchases a policy, he is not manifesting a desire to increase his probability of living longer. Rather, he is acting pursuant to a bequest motive and evidencing the value he places on having his loved ones be financially secure in the event of his death. As one commentator has observed:

The amount of insurance a man takes out may be interpreted as a reflection, *inter alia*, of his concern for his family and dependents but hardly as an index of the value he sets on his own life. A bachelor with no dependents could have no reason to take out flight insurance, notwithstanding the fact that he could be as reluctant as the next man to depart this fugacious life at short notice.

Mishan, *supra* note 29, at 691 (footnote omitted).

Also, we should not seek to derive an individual's implicit valuation of life by directly interviewing him. Under some circumstances, interviewees have an incentive to misrepresent their true preferences. See Viscusi, *supra* note 29, at 205 ("subject [of interview] may misrepresent his preferences either to impress the interviewer or to influence policies"). For example, if you ask a taxpayer what a newer, safer road is worth to him, he is likely to overestimate his true valuation because he knows that in the end he will only pay a small amount in taxes. See *id.* ("respondent may have the incentive to misrepresent his willingness to pay for publicly supported risk reduction efforts, particularly if he will not be required to back up his responses financially"). On the other hand, if you ask the same private citizen what he is willing to donate to help the Red Cross acquire new rescue units, he is likely to underestimate his true valuation because he prefers that other donors finance the risk-reducing technologies for him.

Aside from this motivation for the interviewee to misrepresent his preferences, individuals have little experience dealing with very small risks. Consequently, they will often respond with a value that is different from the values we would derive if we observed their behavior in the marketplace. Schelling notes the problem of assessing and valuing small risks but argues that this problem exists in the marketplace as well as in interviews. T. SCHELLING, *supra* note 40, at 128-30. Equating the two situations seems questionable, however. An individual is more likely to assess and value risks accurately when he is actually spending his hard-earned money than when he is answering hypothetical questions. Asking individuals to assess small risks is especially problematic when interviewees are asked to consider the risk of dying because most people find this to be an unpleasant exercise.

55. See Dardis, *supra* note 43, at 1077 ("investigat[ing] voluntary purchases of smoke detectors

to accept dangerous jobs.<sup>56</sup> Not all studies have revealed the same valuations,<sup>57</sup> but valuations should become more reliable as we encourage more studies and as economists discover better techniques for valuation.<sup>58</sup>

One problem with many of the studies that have observed market behavior is that they only discover the valuation of the marginal person. For example, if the risk premium of a worker building a skyscraper is one dollar per hour, we know only that those who demand a lower risk premium than the worker are willing to accept the job. We cannot tell which worker demands exactly one dollar per hour or which workers would have accepted the additional risk for less than an additional dollar per hour. Similarly, observing whether individuals are willing to buy smoke detectors will yield very limited information. If the price of a smoke detector is twenty dollars, we know only that this is the value the marginal consumer places on the smoke detector. Very few people are on this margin, and we cannot say much about the others.

We could get better information if we considered market evidence about consumers with the ability to purchase more continuous degrees of risk reduction. Safety features that are not legally required on cars provide one example. Some car models have more solid bodies and are more crash resistant than others. Optional features such as air bags, antilock brakes, and shatter-resistant windshields are also available. Some of these options provide relatively inexpensive means to reduce the risk of premature death, while others are relatively expensive. Suppose we place the numerous safety options along a spectrum according to the relative expense of obtaining a

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to estimate consumer willingness to pay for risk reduction"). Other studies have focused on seatbelt usage, willingness to speed, willingness not to use crosswalks, and consumer attitudes toward actions that lessen risk. C. GILLETTE & T. HOPKINS, *supra* note 8, at 40.

56. See generally Thaler & Rosen, *The Value of Saving a Life: Evidence from the Labor Market*, in *HOUSEHOLD PRODUCTION AND CONSUMPTION* 265 (N. Terleckjz ed. 1976); R. Thaler, *The Value of Saving A Life: A Market Estimate* (1974) (doctoral dissertation available at the University of Rochester Library). Reliance on risk premiums for workers, however, should take into account the cognitive dissonance problem that may result when "those who find themselves in risky situations without an easy way of escape are prone to deny the existence of the risk." See C. GILLETTE & T. HOPKINS, *supra* note 8, at 42-43.

57. See Morall, *A Review of the Record*, REGISTER, Nov.-Dec. 1986, at 25, 34 ("16 careful studies" resulted in "estimates vary[ing] from about \$400,000 to about \$9.7 million per life saved, with a mean estimate of \$3.3 million and a median estimate of \$1.7 million"); Viscusi, *supra* note 29, at 201 (table summarizing market studies, which estimated implicit value of life ranging from \$560 thousand to \$11 million, measured in 1982 dollars).

58. Federal and state funding should be made available to help finance these studies. Governmental funding would be cost effective if the reduced litigation costs to the public were greater than the total cost of the subsidies. In other words, funding is socially desirable to the extent it enables us to spend fewer tax dollars on the salaries of judges, clerks, administrators, bailiffs, stenographers, and juries. Until reliable studies are conducted that determine variations in risk evaluation for relevant populations, juries should be permitted to hear expert evidence relating to the subjective values of life of the population put at risk and their relation to the population as a whole. This is an unfortunate but necessary transition cost associated with the proposed method of awarding damages.

given decrease in the risk of premature death. Figure 1 represents the distribution of car purchasers over this range of options.

Note that at one extreme there are purchasers who are not willing to make any expenditures on car options that reduce their risk of death (point *A*). At the other extreme, there are some individuals who are willing to purchase all the reduction options, regardless of cost (point *B*). Most car purchasers, however, lie somewhere between these two extremes because they are willing to pay for some, but not all, of the means of reducing the risk of death. These people will not purchase all of the safety options because at some point, the costs of purchasing additional risk reductions outweigh for them the benefits of reducing the risk of death. The more highly a person values his life, the more safety precautions he will purchase, and the closer to point *B* he will appear on Figure 1.

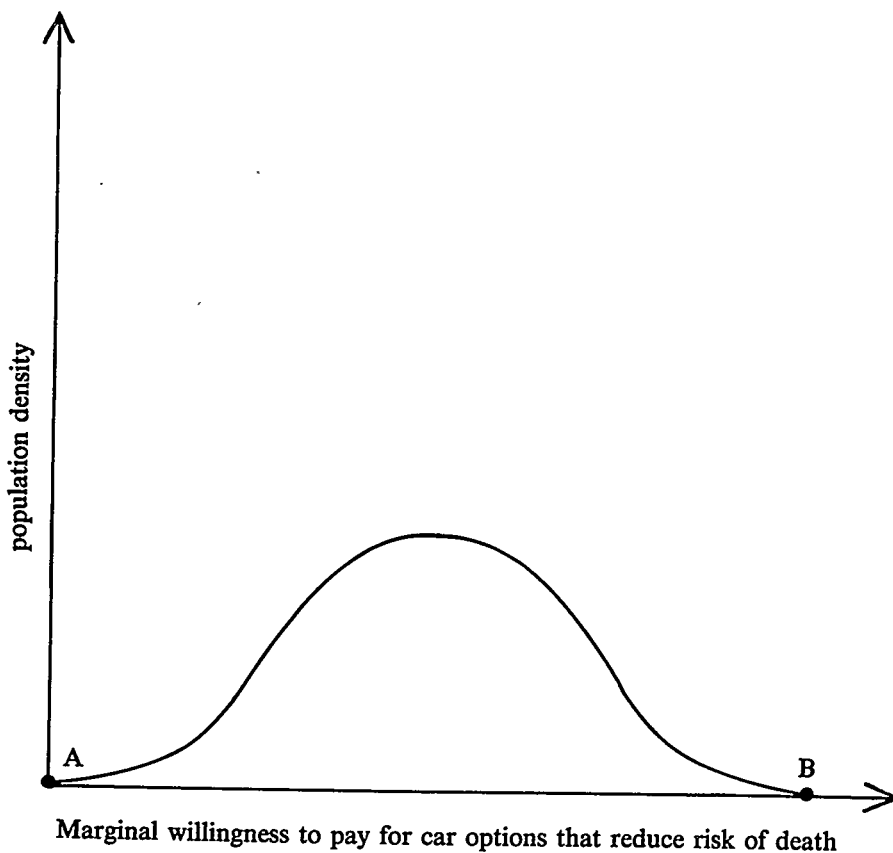


FIGURE 1

This kind of study can be very useful in determining any population's willingness to pay for reductions in the risk of death. We can determine where consumers in the relevant population tend to fall along this spectrum from least safe to most safe cars. By observing how much these individuals tend to spend for risk reduction in this context, we can assess their marginal willingness to pay for risk reduction in general.

Let us return to the negligently produced airplane engine example to illustrate fully this recommended approach. Recall our three assumptions: (1) commercial air travellers earn more than \$20,000 per year; (2) they range in age from fifteen to sixty years; and (3) seventy percent of commercial air travellers are male. Now suppose that a plane crashes as a result of a negligently produced engine and three hundred passengers are killed. Their estates bring a class action on behalf of the decedents to recover for wrongful death. How should the court determine the average value of life of the population put at risk, given our assumptions about the characteristics of the relevant population? It should determine, with the aid of expert witnesses, where fifteen to sixty year old individuals with an income greater than \$20,000 per year tend to fall in Figure 1, which represents car purchasers as a whole. In other words, how much do these individuals tend to be willing to pay for increased car safety? In making its determination, the court should consider certain discrete characteristics separately.<sup>59</sup> Thus, assuming that males and females as a group will differ somewhat in their purchasing patterns with respect to car safety, the court should determine the average marginal willingness to pay for both male and female airplane passengers. The figure for males will be multiplied by 0.7 and the figure for females will be multiplied by 0.3 to reflect the proportion of males to females in the population.

Of course, courts should not look only to car safety studies in calculating a population's willingness to pay for risk reduction. They should examine a broad variety of studies, especially those that allow consumers to choose from a range of safety precautions with different costs. In addition, courts may have to adjust the willingness to pay numbers to account for different causes of death. If, for example, a court was using car safety studies in a case involving microwave ovens that cause cancer, the court would have to account for the fact that people generally fear death by cancer more than death in a car accident. Therefore, people would be willing to pay relatively more

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59. The first two assumptions reflect relatively continuous characteristics of individuals. In other words, there are so many possible numbers that can represent individuals' incomes or ages that we tend not to perceive any clearly delineated line between each additional second the person has been alive or each additional penny of annual income. Thus, it becomes more appropriate to lump these characteristics into ranges (i.e., income range, age range) to consider differences in consumer behavior. In contrast, the gender of an individual is an essentially discrete characteristic. As a result, it is generally not appropriate to consider a gender range.

to reduce their risk of death by cancer.<sup>60</sup>

#### IV. WHY HAVE SO FEW COURTS AWARDED DAMAGES FOR LOSS OF THE ENJOYMENT OF LIFE?

Courts generally have not held tortfeasors liable for the value of the decedent's life in wrongful death actions.<sup>61</sup> This Part posits and criticizes six possible reasons why they have not imposed this cost on tortfeasors.

##### A. TRADITION

Courts may refuse to award hedonic damages out of fidelity to precedent or tradition. The history of wrongful death statutes began with the English common law rule that there was no cause of action for the death of a person.<sup>62</sup> This rule was first enunciated in *Baker v. Bolton*,<sup>63</sup> a trial court decision that cited no authority. Although later court opinions followed this rule fastidiously, they failed to state any theoretical justifications for it.<sup>64</sup> Perhaps the courts' refusal to assess hedonic damages remains as a historic artifact of this common law rule.

Upon closer examination, however, this explanation seems unlikely. Every state has enacted wrongful death statutes, which permit the decedent's survivors to sue the tortfeasor.<sup>65</sup> Moreover, both English and American courts permit the decedent's estate to sue for some losses suffered by the decedent.<sup>66</sup> English courts have been awarding damages for lost expectation of life to both injured plaintiffs and decedents' estates for years, although the amount awarded in wrongful death cases has been an arbitrary sum.<sup>67</sup> Many Ameri-

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60. An alternative to adjusting the hedonic damages to account for different types of death would be to include recovery for pain and suffering before death. Thus, if the cause of death involves great pain and suffering, the costs of the pain and suffering can be included in this separate element. However, a separate pain and suffering award would not adequately include a special aversion to a particular type of death that does not entail physical pain and suffering before death but does entail a grave loss of dignity.

61. See *supra* note 26 and accompanying text.

62. For a historical perspective of English common law treatment of wrongful death, see generally Cohen, *supra* note 48, at 297-98 & n.11; Note, *The Origin of The Rule In Baker v. Bolton*, 32 LAW Q. REV. 431 (1916) (by W. Holdsworth).

63. 1 Camp. 493, 170 Eng. Rep. 1033 (1808).

64. See Note, *supra* note 62, at 431 (observing that the rule "has been upheld in all the reported cases, not by reasoning based upon a discussion of the question of its policy or impolicy . . . but by the assertion that it is a rule of law which must be followed").

65. Cohen, *supra* note 48, at 296 n.5, 298-99.

66. *Id.* at 298 n.13, 299.

67. See *id.* at 309-13 (discussing development of this element of damages in wrongful death actions and the present arbitrary award that is mechanically adjusted in response to inflation); Case Comment, *Damages—Shortening of Life Expectancy as an Element of Damages in an Action for Personal Injury*, 21 RUTGERS L.J. 340, 344 (1967) (noting that by 1950, England had instituted "an arbitrary maximum limit of £500" for loss of life expectancy in personal injury actions).

can courts hold the tortfeasor liable for the victim's impaired ability to enjoy life's pleasures when the victim's injury falls short of death.<sup>68</sup>

Surely death is an impairment in the extreme, and it calls for a damages amount greater than the amount awarded to injured but living plaintiffs.<sup>69</sup> If not, society would be faced with the paradox that it would be more condemnable to take away part of the value of life than to take away all of it.<sup>70</sup> Moreover, the practical result would be that potential tortfeasors would take greater care to avoid injuries than they would to avoid deaths.

#### B. WHY ENRICH THE HEIRS?

Another potential justification for not awarding damages for loss of enjoyment of life is that the award would be "wasteful" because a monetary award would not help the decedent. Why hold an injurer liable for large sums of money when the only effect would be to enrich the victim's heirs?

The flaw in this argument is that it presupposes that the rationale behind wrongful death damages is compensation. In the wrongful death context, tort law should not be concerned with compensation. Rather, it should focus on creating the right incentives for potential tortfeasors to take optimal care by forcing them to consider adequately the costs they impose on others.<sup>71</sup> What is important is that the tortfeasor pay the damages; it matters little who ultimately gets the money. If society objects to the heirs' receipt of this "windfall," then the money can be put to a more acceptable use without

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68. See Recent Developments, *Damages—Compensation for Curtailment of Life Expectancy as a Separate Element of Damages*, 65 MICH. L. REV. 786, 790 & n.20 (1967) (mentioning cases in which injured plaintiffs recovered for the loss of "creative or pleasurable pursuits"); see also *Hoskie v. United States*, 666 F.2d 1353, 1357 (10th Cir. 1981) (inability to engage in enjoyable physical and social activities is compensable); *Thompson v. National R.R. Passenger Corp.*, 621 F.2d 814, 824 (6th Cir.) (Tennessee recognizes impairment of life's enjoyment as an element of intangible damages), *cert. denied*, 449 U.S. 1035 (1980); *Pierce v. New York Cent. R.R.*, 409 F.2d 1392, 1398 (6th Cir. 1969) (loss of life's enjoyments constitutes an element of compensable damages under Michigan law); *Judd v. Rowley's Cherry Hill Orchards, Inc.*, 611 P.2d 1216, 1221 (Utah 1980) (diminished enjoyment of life should be included in mental pain and suffering); *Mariner v. Marsden*, 610 P.2d 6, 12 (Wyo. 1980) (loss of enjoyment of life is a compensable damage in action to recover for injuries).

69. This assertion holds even though hedonic damages awards to injured plaintiffs can be justified under both the compensation and deterrence rationales, whereas awards to decedents do not involve compensation. For example, to compensate an injured plaintiff fully, the court will award a sum equivalent to the injured plaintiff's losses. If the court is not concerned with compensating an injured plaintiff, but only seeks to deter the tortfeasor from engaging in activities with an unreasonable risk of injury, the court will still hold the tortfeasor liable for a sum equivalent to the losses suffered by the plaintiff. Thus, in cases involving injury but not death, the amount of the award for proper deterrence is equal to the amount needed to compensate the victim. But because we want potential tortfeasors to take even more care to avoid causing deaths than injuries, we must impose higher liability for deaths than for injuries.

70. Cf. Recent Developments, *supra* note 68, at 790 (criticizing courts for refusing to award damages for the shortening of a victim's life expectancy).

71. See *supra* notes 9-14 and accompanying text.

weakening the argument for holding the tortfeasor liable. For example, we create the same incentives whether the damages award is used to fund a homeless shelter in a neighboring town or is given to the decedent's heirs.<sup>72</sup> However, by allowing the heirs to retain at least part of the damages award, we give them more incentive to ensure that a suit is brought and maintained. Awarding damages to the heirs makes it more likely that the tortfeasor will face efficient incentives.

#### C. HEDONIC DAMAGES AWARDS WOULD ENTAIL HIGH LITIGATION COSTS

Another possible objection to awarding damages based upon the decedent's value of life is that proving a value would entail high litigation costs.<sup>73</sup> We could certainly conceive of a rule whereby witnesses could be dragged into court testifying as to whether a particular decedent was happy or unhappy, what he did in his spare time, what personality traits he possessed, whether his girlfriend was nice or mean to him, what his consumption patterns indicated about his enjoyment of life, and whether he received a value from his employment other than his weekly paycheck. If lawyers are given an unlimited amount of resources and a permissive judge, any rule of law would result in huge litigation costs.<sup>74</sup> The relevant question is whether it is possible to ascertain a value of human life without incurring "unreasonable" litigation expenses. By awarding hedonic damages equal to the average value of life of the population the tortfeasor put at risk, courts will obviate the need for individualized showings of the value of the victim's life. This method may initially result in high litigation costs as courts begin to determine these average values. However, eventually they will have reliable empirical studies to refer to and litigation costs will decrease.<sup>75</sup>

#### D. HEDONIC DAMAGES AWARDS WOULD BE ARBITRARY OR SPECULATIVE

Some critics of hedonic damages object to awarding damages without some feasible standard for doing so. One objection may emanate from a distaste with the arbitrary sum set by English courts for the value of a dece-

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72. In the antitrust context, Salop and White discuss the possibility of "decoupling," or awarding the plaintiff a smaller damages award than is ultimately levied against the defendant. See Salop & White, *Economic Analysis of Private Antitrust Litigation*, 74 GEO. L.J. 1001, 1037 (1986).

73. Few would quarrel with the assertion that our society spends an enormous amount of money on litigation. See G. CALABRESI, *supra* note 4, at 239 (noting criticisms of fault system based, in part, on its excessive costs); Davidson, *Does the Tort System Need an Overhaul?*, 72 A.B.A. J., July 1986, at 36, 37 ("tort litigation costs total only 50 percent of the insurance premium dollar").

74. This assertion is analogous to the familiar axiom that "the job always expands to fill the time allotted."

75. If courts or legislatures create new tort actions, there will also be a brief period during which the valuation for the average victim of that tort is intensely litigated.

dent's life.<sup>76</sup> Other critics object because the damages awarded would be speculative.<sup>77</sup> They argue that it is impossible to find an exact value that the decedent placed on his life.<sup>78</sup>

These criticisms miss the point of hedonic damages. If we only seek to create proper incentives for potential tortfeasors to take an appropriate amount of care, then it is not essential that we find the exact value that each decedent placed on his life. In measuring the expected costs associated with a particular activity, a potential tortfeasor will only consider the average value of life of the members of the population he puts at risk.<sup>79</sup> In other words, because a potential tortfeasor has no way of knowing *ex ante* which individual will die in the event of a death, he can only calculate expected costs by determining what an average valuation is likely to be. As long as the amount awarded to decedents is the same as the average value of the lives of the population put at risk, hedonic damages will create the optimal incentives.

Even if it is impossible to calculate an exact average, it does not follow that we should not attempt to make an approximate valuation. In other damages contexts, difficulty in achieving accurate measurement is not a sufficient reason to bar recovery.<sup>80</sup> We can at least be certain that the value of lost enjoy-

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76. *Cf.* Case Comment, *supra* note 67, at 344 (failure of English courts to establish a feasible standard for measuring the value of life expectancy was a large reason for rejecting damages for shortening of life).

77. *See* *Sherrod v. Berry*, 827 F.2d 195, 205 (7th Cir. 1987) (defendants objected to testimony of economist as to hedonic value of life on grounds that testimony was too speculative to be admissible), *rev'd on other grounds*, 856 F.2d 802 (7th Cir. 1988) (en banc).

78. *See* Note, *supra* note 12, at 1133-34 (an attempt to determine a decedent's value of life would result in insurmountable problems of calculation).

This note focuses only on determining the cost that the tortfeasor imposes on the decedent by depriving him of future potential years of living. We could produce even more accurate incentives for tortfeasors by also forcing them to internalize the costs to society of killing one of its productive members. Presumably we would impose these costs through the criminal justice system rather than the tort system because criminal law more appropriately focuses on societal vindication. In addition, it is fair to state that in most cases the cost to society will be much smaller than the cost to the decedent. Therefore, this note will not fully consider the losses suffered by society as a whole.

79. A potential tortfeasor will not be certain whether a death will occur, whether he will be found negligent, or what value a potential decedent would place on his life. Thus, a potential tortfeasor implicitly determines an expected cost of undertaking any risky activity. The expected cost can be denoted as the formula  $P \times V$ , in which  $P$  is equivalent to the probability of being held liable for a wrongful death, and  $V$  is equivalent to the average damages award (or the value an average decedent would place on his life). If the potential tortfeasor carries liability insurance, his insurer will also seek to determine  $P \times V$  to calculate the tortfeasor's insurance premiums.  $V$  will vary depending on the tortfeasor's activities. For example, people who purchase pacemakers manufactured by tortfeasor *A* may have a different value of life on average than people who purchase sports cars manufactured by tortfeasor *B*. For a more detailed discussion of expected cost valuation in the context of automobile accidents, see A. POLINSKY, *supra* note 49, at 37-38, 65-66. *See also* C. GOETZ, *supra* note 11, at 77-79 (discussing expected values).

80. *See* *Story Parchment Co. v. Paterson Parchment Paper Co.*, 282 U.S. 555, 563 (1931) ("Where the tort itself is of such a nature as to preclude the ascertainment of the amount of dam-



ment of life is almost always positive,<sup>81</sup> and that we are far from the true valuation by awarding nothing for this loss.

#### E. HEDONIC DAMAGES AWARDS WOULD DEVALUE HUMAN LIFE

Other critics object to placing an explicit dollar value on human life. They warn that by attaching a monetary value to human life, we weaken the essential notion that life is priceless.<sup>82</sup> Humankind is dehumanized when commodified.<sup>83</sup> "Human flourishing" reaches an inferior level because we cannot escape the notion that each of our lives is worth  $x$  number of Mercedes but not quite worth one kidney dialysis machine.<sup>84</sup>

This critique is logically inconsistent, however. If life is indeed priceless, we should force potential tortfeasors to be exceedingly careful; we should

ages with certainty, it would be a perversion of fundamental principles of justice to deny all relief to the injured person, and thereby relieve the wrongdoer from making any amend for his acts. . . . [I]t will be enough if the evidence show the extent of the damages as a matter of just and reasonable inference, although the result be only approximate."); *Sherrod*, 827 F.2d at 205-06 (rule against recovery of speculative damages applies when it is uncertain whether the defendant caused the damages rather than when it is uncertain what the monetary value of damages should be); 1 M. MINZER, J. NATES, C. KIMBALL, D. AXELROD & R. GOLDSTEIN, *DAMAGES IN TORT ACTIONS* § 1.22, at 1-41 to -48 (1989) (uncertainty as to amount of damages sustained, within reason, will not bar recovery).

81. If an individual was suicidal in the sense that he found so much misery in being alive that he was prepared to end his own life, then the value of his lost enjoyment of life may not be positive.

82. See MacLean, *Social Values and the Distribution of Risk*, in *VALUES AT RISK* 75, 85-88 (D. MacLean ed. 1986) (human life is sacred and rich in symbolic content; thus, attempting to place a dollar value on it is objectionable); Abel, *A Critique of American Tort Law*, 8 *BRIT. J.L. & SOC'Y* 199, 207 (1981) (American tort practice of "commodify[ing] our unique experience" by placing dollar values on pain, suffering, and shortening of life expectancy reflects capitalist ideology); see also C. GILLETTE & T. HOPKINS, *supra* note 8, at 24 (noting objection that "the very process of quantification ignores and violates the sanctity of human life"); Swartzman, *Cost-Benefit Analysis in Environmental Regulation: Sources of the Controversy*, in *COST-BENEFIT ANALYSIS AND ENVIRONMENTAL REGULATIONS: POLITICS, ETHICS, AND METHODS* 53, 54 (D. Swartzman, R. Linoff & K. Croke, eds. 1982) (noting through dialogue the common feeling that human life is priceless).

83. See C. GILLETTE & T. HOPKINS, *supra* note 8, at 25 (noting objection that "attempting to quantify the value of human life diminishes that value by suggesting that human life is an exchangeable commodi[ty]"); Kelman, *Cost-Benefit Analysis and Environmental, Safety, and Health Regulation: Ethics and Philosophical Considerations*, in *COST-BENEFIT ANALYSIS AND ENVIRONMENTAL REGULATIONS: POLITICS, ETHICS, AND METHODS* 137, 146 (1982) ("[i]f a good becomes disassociated from positively valued feelings because of market exchange, the good will lose its perceived value to the extent that those feelings are valued"); Radin, *Market-Inalienability*, 100 *HARV. L. REV.* 1849, 1880-81, 1885 (1987) (valuing a person in money is an "inappropriate treatment of a person" because universal market rhetoric "reduces the conception of a person to an abstract, fungible unit with no individuating characteristics"); Tribe, *Ways Not to Think About Plastic Trees: New Foundations for Environmental Law*, 83 *YALE L.J.* 1315, 1329 (1974) (the very act of measurement affects the value being measured because attention is no longer directed to the ostensible content of the value, but rather to the fact that it is "a more or less abstracted indicium of self-interest").

84. Cf. Radin, *supra* note 83, at 1927 n.270 (if adoption of babies entailed spending an explicit sum of money, "we would know that the adoptive parents valued the child as much as a Volvo but not a Mercedes"). Of course, Radin's argument ignores the huge consumer surplus that adoptive parents enjoy from a loving interaction with their children.

make them liable for hedonic damages. When courts refuse to award damages based on the value of lost life, a paradox results. Potential tortfeasors are not sufficiently deterred, and society sacrifices priceless lives to maintain the idea that life is priceless. By refusing to value life, we implicitly devalue it in the eyes of potential tortfeasors.

At some level, of course, our society has implicitly determined that human life is not in fact priceless.<sup>85</sup> Society is unwilling to ban the use of automobiles, airplanes, or bulldozers even though their use frequently results in loss of life.<sup>86</sup> Nor does society forbid people to ski, play football, or climb ladders even though these activities are inherently dangerous. Instead, society has made the determination that the benefits it derives from these goods and activities exceed the value of the lives lost as a result.

#### F. HEDONIC DAMAGES AWARDS WOULD RESULT IN DOUBLE COMPENSATION

The final objection to awarding damages for loss of life's pleasures is that a hedonic damages award would amount to double compensation for injury.<sup>87</sup>

85. Gillette and Hopkins note that federal agencies are willing to place a value on human life. C. GILLETTE AND T. HOPKINS, *supra* note 8, at 1. The implicit value a federal agency places on human life can be derived by dividing the total expenditure it is willing to make for a lifesaving program by the expected number of lives saved. *See id.*

86. *Cf.* Machol, *supra* note 47, at 50 (although many people feel "that human life is priceless, and therefore no expense is too great if it has any possibility of saving lives . . . it is not a viable approach to system design in a world of finite resources").

87. *See* Blodgett, *Hedonic Damages: A Price on the Pleasures of Life*, 71 A.B.A. J., Feb. 1985, at 25 (reviewing the hedonic damages awards in *Sherrod v. Berry*, 827 F.2d 195 (7th Cir. 1987) and discussing with the attorneys the advantages and disadvantages of such damages).

A related argument is often made in the personal injury context. More specifically, many courts refuse to award damages to an injured plaintiff both for pain and suffering and for loss of enjoyment of life on the ground that to do so would entail double compensation. *See Huff v. Tracy*, 57 Cal. App. 3d 939, 943-44, 129 Cal. Rptr. 551, 553-54 (1976) (holding that although loss of enjoyment of life is not distinctly compensable from general pain and suffering, court's instruction separating loss of enjoyment of life from pain and suffering was harmless error because first instruction portrayed one item of damages under category of pain and suffering); *Polyzer v. McGraw*, 360 N.W.2d 748, 752-53 (Iowa 1985) (allowing recovery for loss of enjoyment of life to a seriously injured plaintiff is duplicative because loss of enjoyment of life is already considered as an element in damages for pain and suffering); *McDougald v. Garber*, 73 N.Y.2d 246, 257, 536 N.E.2d 372, 376-77, 538 N.Y.S.2d 937, 941 (1989) (holding that the jury should not make separate awards for pain and suffering and loss of enjoyment of life). *But cf.* *Thompson v. National R.R. Passenger Corp.*, 621 F.2d 814, 824 (6th Cir.) (pain and suffering, permanent injury, and loss of life's enjoyment each represent separate losses that the victim incurs), *cert. denied*, 449 U.S. 1035 (1980).

One commentator has demonstrated the difference between pain and suffering and loss of enjoyment of life in personal injury actions with an example of two equally talented gymnasts who both lose an arm. Comment, *Loss of Enjoyment of Life as a Separate Element of Damages*, 12 PAC. L.J. 965, 979 (1981) (by C. Cramer) (one gymnast, whose arm is severed in car accident, experiences greater pain and suffering than the other gymnast, whose arm is removed in "a totally anesthetized procedure," yet both are deprived of the joy they experienced in performing gymnastics).

Some courts have denied claims in wrongful death actions for the loss of enjoyment of life except

Part of the value of life is the enjoyment that comes from spending money to buy goods and services. Therefore, if courts award a decedent's estate both the value of his life and his future income, the estate is overcompensated. This argument is sound. Courts should not award both.<sup>88</sup> But this does not mean that courts should not award hedonic damages—rather, courts should award hedonic damages but not future income. Although the two types of damages overlap to some extent, future income awards do not include all of the costs imposed on decedents. Hedonic damages, in contrast, do include the value decedents would have derived from future income. Hedonic damages therefore provide better deterrence for potential tortfeasors.

#### V. SOCIAL IMPLICATIONS OF DAMAGES AWARDS BASED ON THE WILLINGNESS TO PAY APPROACH

Critics of the application of economic analysis to all areas of the law often object to the "single-mindedness" of the approach.<sup>89</sup> They argue that even if practicable, efficiency-improving legal rules can be developed, efficiency is but one of several goals that society strives to achieve through our legal system. These critics argue that more efficient rules often result in increased

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as an element of pain and suffering incurred before death. *See Missouri Pac. R.R. v. Lane*, 720 S.W.2d 830, 834 (Tex. Ct. App. 1986) (in wrongful death action, loss of enjoyment of life may not be claimed as a separate element of damages, but may be treated as a factor in determining damages in general or damages for pain and suffering). This holding is problematic. Awarding damages both for pain and suffering and for loss of life's pleasures would not be duplicative in wrongful death actions. For example, imagine an instantaneous death. In that case, the victim incurs no pain and suffering, yet he is deprived of those years of life's enjoyment that his death has taken away from him.

88. That is, courts should not award both in an action brought by the decedent's estate. Presumably, a portion of the decedent's future income would be awarded to any close family member who brought a wrongful death action on his own behalf. This portion would represent the amount the plaintiff would have received as a dependent of the decedent had the decedent lived. *See W. PROSSER & W. KEETON, supra* note 15, § 127, at 949 (discussing recovery for loss of economic benefit that beneficiary "might reasonably have expected to receive from the decedent in the form of support, services or contributions" had the decedent not been killed). Awarding this money to the dependent would not constitute double compensation. If the decedent had lived, he would have experienced the pleasure of the income, that is, the satisfaction of knowing his loved ones were not wanting. The dependents would also have received the income. Thus, the losses would be separate and could exist together.

89. *See, e.g., Andrews, Cost-Benefit Analysis As Regulatory Reform*, in *COST-BENEFIT ANALYSIS AND ENVIRONMENTAL REGULATIONS: POLITICS, ETHICS, AND METHODS* 107, 121 (1982) (noting that in the context of environmental regulation, opponents of cost-benefit analysis object that it already has a disproportionately coercive effect on public policy); Kelman, *Consumption Theory, Production Theory and Ideology in the Coase Theorem*, 52 S. CAL. L. REV. 669, 695-96 (1979) (criticizing economic analysis for its failure to recognize that "socio-legal stamps of approval or disapproval" on certain activities actually help to shape tastes with respect to that activity); Radin, *supra* note 83, at 1936 (criticizing economic analysis for its failure to recognize and correctly understand the significance of the normative category of market-inalienability because of the market orientation of its premises).

wealth inequalities and the degradation of the poor, women, and minorities.<sup>90</sup> Because of these undesirable consequences of efficiency-improving rules, these critics believe that considerations of equality and human dignity should predominate over considerations of efficiency.<sup>91</sup> Thus, one possible critique of this note's proposal is that although it would improve the efficiency of wrongful death law, it makes implications about the relative values of life that society is not prepared to accept.

Whether or not one believes that legal rules which satisfy efficiency criteria lead to unjust results, it is useful to consider the implications of any proposed legal rule if only to help predict whether society would implement it. This depends on the relative effects of the proposed rule on the various subgroups of society and the degree to which society is committed to ideals of human equality.<sup>92</sup>

90. See Abel, *supra* note 82, at 201-03 (arguing that capitalist tort law, which purports to promote efficiency, in fact fosters disparity between classes, races, and genders).

91. For a more extreme position, see *id.* at 210 ("The paramount criterion for a just compensation system should be equality.").

92. G. CALABRESI & P. BOBBITT, TRAGIC CHOICES 149-91 (1978). Calabresi and Bobbitt describe society's attempt to create efficient rules as cyclical. *Id.* at 195-99. Society must decide both how much of a highly valued good it will produce with its scarce resources and who will receive those goods. *Id.* at 19-20. When members of society become aware that not everyone's desire or need for the important good can be satisfied, and they are made aware of the decisionmaking criterion used to determine who shall receive those goods, they become outraged and demand a new method of making decisions. *Id.* at 195. Society then implements a new decisionmaking criterion until renewed realization of the tragic scarcity of a good once again results in a demand for yet another method of reaching decisions. *Id.* Each approach fails because none can simultaneously satisfy societal values of egalitarianism, effectuation of individual desires, decent treatment for all citizens, and honesty and openness. *Id.* at 49-50. Society does not want to accept that not all life-saving goods can be supplied in an unlimited fashion to all who desperately desire or need them. *Id.* at 134. Calabresi and Bobbitt view this cycle as beneficial because by constantly changing the allocative strategy, society can avoid feeling hopeless while reaffirming important values. *Id.* at 196.

Thus, society is outraged to learn that Ford Motor Company calculated a value of life in determining whether it would be cost effective to move the gas tank in their Pinto. See MacLean, *supra* note 82, at 85 (using the Pinto example to illustrate public disapproval of pricing lives). Similarly, members of society would become angry if they learned that their government had decided not to impose a particular safety regulation because, based on its assessment of the value of saving a life, the costs of doing so were too high. See G. CALABRESI & P. BOBBITT, *supra*, at 39 ("If the political process refuses to provide a group such as the aged with hemodialysis, the clear assertion has been made that some lives are not worth saving. To the extent that our lives and institutions depend on the notion that life is beyond price, such a refusal to save lives is horribly costly.").

But surely we do not want the government to spend a million dollars on a program that will only save one life when that money could be spent on an alternative program that will save dozens of lives. See C. GILLETTE & T. HOPKINS, *supra* note 8, at 28 (discussing the principle of maximum life-saving); Morall, *supra* note 57, at 34 (reviewing the disparity in costs of certain risk-reducing regulations and criticizing the most expensive ones because society could use that money to save more lives if it rearranged priorities). *But cf.* Fried, *supra* note 27 (discussing anomaly of society's expenditure of greater sums to save persons who are presently in peril than to save a statistical life by preventing others from experiencing that peril). There may be some costs associated with recognizing a pecuniary value of life. Without that recognition, however, the government cannot save the maximum number of lives. See Zeckhauser & Shepard, *supra* note 41, at 6 (noting that by openly

One way to assess the impact of a proposed legal rule is to consider whether fully informed individuals would think that it is fair.<sup>93</sup> To determine fairness, John Rawls would consider whether individuals would willingly agree to a legal rule from behind a "veil of ignorance."<sup>94</sup> That is, would people agree to institute the proposed rule if they did not know whether they would enter the world as a man or woman; rich or poor; or black or white? A Rawlsian fairness argument would require not only that a particular incentive strategy lead to a net reduction of lost lives, but also that it result in a fair apportionment of a risk of death throughout society.<sup>95</sup> Indeed, some commentators would strengthen the requirement: "there must be a long run equality of benefits and burdens, except where departures from equality redound to the benefit of the worst-off class."<sup>96</sup>

If tortfeasors pay significantly smaller damages awards when a member of one subgroup dies, they are likely to cause relatively more deaths involving members of that subgroup. Systematic variations in damages awards among subgroups will result in unfairness. It is therefore important to ask whether, under the willingness to pay method, tortfeasors who impose a risk of death on two separate populations will be liable for disparate sums because the populations are composed of individuals of different wealth groups, races, genders, age groups, or individuals with different tastes for risky activities, or pre-accident physical conditions. A disparity in damages awards will result if individuals in a particular subgroup tend to be more risk averse than the population as a whole. An individual who has a greater enjoyment of life may be more risk averse, for if he has more to lose as a result of premature death, then he may be willing to spend more to avoid death. The more risk averse the members of the population put at risk tend to be, the greater the hedonic damages that will be awarded.

If there will be different damages awards, two additional questions must be answered: is there an acceptable justification for the difference, and will

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discussing the costs and benefits of saving lives, society is able both to save more lives and have more dollars available for other purposes).

93. See Rawls, *Justice as Fairness*, in PHILOSOPHY, POLITICS, AND SOCIETY 132 (P. Laslett & W. Runciman, ed., 2d ser. 1962) (asserting that a human practice cannot be just unless it is fair because fairness is a fundamental idea in the concept of justice).

94. Rawls, *Distributive Justice*, in PHILOSOPHY, POLITICS, AND SOCIETY 60 (P. Laslett & W. Runciman ed., 3d ser. 1967) ("A veil of ignorance prevents anyone from being advantaged or disadvantaged by the contingencies of social class and fortune; and hence the bargaining problems which arise in everyday life from the possession of this knowledge do not affect the choice of principles.").

95. See Fried, *supra* note 27, at 1426 ("An argument from fairness would hold that it is not sufficient to justify the choice of a particular life-saving strategy that it leads to the least net loss of lives in the long run. It must also be shown that the risk of death is fairly apportioned among the relevant population.").

96. *Id.* at 1426 n.5 (citing Rawls, *Justice as Fairness*, 67 PHIL. REV. 164 (1958), and Rawls, *Distributive Justice*, in PHILOSOPHY, POLITICS, AND SOCIETY 58 (P. Laslett & W. Runciman ed., 3d ser. 1967)).

there be a greater or lesser difference than exists under the present income-based method of measuring damages? The second question must be asked because even if this proposal does lead to variations, as long as these variations are generally smaller than the variations under present damages law, then this proposal would be fairer than existing law.

#### A. WEALTH GROUP

Under the proposed rule, damages awards would probably vary according to the average wealth of the population put at risk. A poor person may be able to enjoy life in fewer ways than a rich person. For example, although a richer person may have the option of spending his Tuesday evening either at the ballet or at home playing cards with his wife, a poorer person can take advantage of only the latter option. Also, economic theory predicts that as an individual's income rises, his consumer surplus rises. This is because he is not only willing to pay more for a single good but he also able to purchase more goods. Of course, this analysis does not consider nonmaterial factors that contribute to happiness or the lack thereof: the quality of one's relationship with his spouse, for instance, or the health of one's aging parents. The point is that when two individuals are alike in every other respect, the wealthier individual will have greater means with which to enjoy life. As a result, we might expect that the wealthier individual has more to lose from premature death. If so, he should be willing to pay more to avoid risks. When a particular population put at risk systematically pays more to avoid risks, the hedonic damages awards will be larger.

Regardless of the extent to which he enjoys life, a poor person might demand a lower price for incurring risk than a wealthy person because he has a greater need for the money. On the other hand, there are at least some instances in which poor individuals tend to be more risk averse than wealthy individuals. For example, rich people are more likely to invest in the stock market while poor people tend to prefer federally insured savings accounts. In this example, wealth lessens the impact of the loss for the rich person. Perhaps poor people are more risk averse when faced with risks of death as well. For example, a poor person may be more concerned than a rich person that if he dies, his children will not be well cared for. If so, he may be very careful to avoid risks.

To the extent a disparity in damages awards does result from wealth differences, it would nevertheless be a smaller variance than already exists under the present income-based method of valuation. Under the willingness to pay method, a person's income may affect the damages award to some extent, but under the income-based method, a person's income is the sole determinant of the size of the damages award. Therefore, those concerned about the present

disparity in damages awards should prefer the proposed rule to the present rule.

#### B. RACE

There is no a priori reason to believe that an individual's enjoyment of life's pleasures will be dependent upon his race. Medical science has not discovered any race-specific biological characteristics that affect the degree of happiness one feels when watching a sunrise or eating a holiday feast with relatives and friends. Of course, to the extent that members of a race are systematically discriminated against, their ability to enjoy life is hampered. This reduced enjoyment of life will show up in the hedonic damages awards only to the extent it means that ethnic groups who suffer from racism are less risk averse. However, there have been no conclusive studies which show that the risk characteristics of the members of a particular race are correlated with the presence of discrimination against those members. To the extent the presence of discrimination does affect the risk characteristics of the members of a race, the differences that result from wealth disparities will likely far outweigh the effect from impaired ability to enjoy life.

Given that the average income differs among races,<sup>97</sup> members of one race may on average face fewer means of deriving pleasure relative to members of another race. The discussion of damages awards among different wealth groups applies as well to the problem of income disparity among races. The race of the individual or population put at risk may be irrelevant except to the extent it is a proxy for wealth. And again, to the extent disparate damages awards result, we would expect the disparity to at least be smaller than under present damages law.

#### C. GENDER

The ability of an individual to enjoy life's pleasures is probably not dependent on the person's gender, despite the radical feminist belief that the world is structured for the enjoyment of men<sup>98</sup> or the belief that women experience

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97. See T. SOWELL *supra* note 53, at 4-5 (noting that incomes "differ substantially among American ethnic groups" and presenting table comparing average incomes of different ethnic groups).

98. See S. DEBEAUVOIR, *THE SECOND SEX* xxxiii (— ed. 1989) (asserting that our world always has and still does belong to men); G. JOSEPH & J. LEWIS, *COMMON DIFFERENCES: CONFLICTS IN BLACK AND WHITE FEMINIST PERSPECTIVES* 44 (1986) ("A cursory overview of U.S. life reveals a society that has systematically institutionalized male power in its legal, economic, political, educational, and cultural structure.").

To the extent that women are systematically discriminated against, their ability to enjoy life may be hampered by sexism. However, it appears that men suffer from the effects of sexism as well. Just as some women who desire to be combat soldiers are not permitted to do so, some men who desire to sell cosmetics or be a cheerleader are also not permitted to do so. Women's ability to enjoy life is therefore only systematically less than men's ability to enjoy life to the extent that women suffer more from the effects of sexism than do men.

more intense emotions than men.<sup>99</sup> Because women on average earn less than men, the present income-based method yields smaller damages awards for women than it does for men. It is important at this point to distinguish between income and wealth. Although women as a group earn less than men, they often have access to greater wealth than their income alone represents. This is because married women share their husbands' wealth and exhibit the consumption patterns of their husbands<sup>100</sup> and because men tend to die earlier than women, leaving their wealth to their wives. If it is true that a rich person would demand more to incur a given risk, he does so because of his greater wealth, not his greater income. Therefore, we would expect the present disparity in damages awards to be reduced if hedonic damages were awarded under a willingness to pay approach.

The income disparity may nevertheless play a greater role if the population put at risk is composed of single or younger women, for they will possess less wealth as a group than their male counterparts. As seen in the discussion of wealth groups, however, we would expect any disparity to be smaller under the new rule. Moreover, because women have a longer life expectancy than men, a woman who died at age forty would be deprived of more years of enjoying life than would a forty year old man. In addition, women tend to be more risk averse than men.<sup>101</sup> This would also tend to diminish or possibly eliminate the present disparity.

#### D. AGE GROUP

Under the present method of valuation, damages awards vary depending on the decedent's age. This disparity will probably continue to exist under this note's proposal. When an individual's life is taken, he is deprived of a certain number of years of life. An elderly person loses fewer years of potential life than does a younger person. Thus, even though each lost year may have been just as enjoyable for an elderly person as for a young person,<sup>102</sup> an

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99. See Hawley & Sanford, *Psychotherapy*, in *THE NEW OUR BODIES, OURSELVES* 73 (1984) (noting studies indicating that psychologists view the "healthy woman" as more emotional than the "healthy male").

100. Cf. Cohen, *supra* note 48, at 334 (courts should consider family income rather than individual income of decedent).

101. See *id.* (noting tendency of women to be more risk averse than men). Cohen argues that this increased life expectancy, coupled with a greater risk aversion, justifies placing a greater value on women's lives. *Id.* at 334-35.

102. Not all economists agree with this statement. See Zeckhauser & Shepard, *supra* note 41, at 24 ("A year at a relatively early age when one's health is likely to be good may be valued more highly than one in the years of decline."). The conclusion that an elderly person values an additional year of life less highly than others seems rather speculative. Many elderly persons are more self-confident, less hardworking, and more likely to appreciate the beauty of the world around them. The general point, however, is that the elderly individual loses fewer of these valuable years than a younger person does if his life is cut short.



elderly person's total loss will probably be less.

It should also be noted, however, that because individuals generally place more value on events or conditions in the near future than in the remote future, a forty year old person is likely to value the enjoyment of life at age eighty less highly than will a seventy-nine year old person. Therefore, proper discounting of future years may significantly lessen the disparity in valuations.<sup>103</sup> In addition, elderly individuals tend to be more risk averse.<sup>104</sup> This behavior may be partly explained by a greater awareness of risk on the part of older individuals.<sup>105</sup> Natural selection may also play a role. That is, these individuals may have lived as long as they have because they have always avoided risky activities. A third explanation may be that as one's remaining years become shorter, they also become more precious. This third explanation supports a further lessening of the disparity in valuations.

To the extent the disparity remains, the resulting larger damages awards for younger populations seem justified. As stated in Part III, if we impose the same liability regardless of age, potential tortfeasors will take too much care when producing goods used primarily by the elderly. This excessive care will make these goods too expensive relative to how their users value risk.

Moreover, the disparity in damages awards among different age groups will probably be smaller under the proposed rule than under the present income-based determination of damages. For if a seventy-nine year old person is tortiously killed under an income-based determination of damages, the tortfeasor will be held liable for little, if anything, because no future earnings have been lost. In contrast, if the tortfeasor is required to pay for those years of life which were forfeited, then the damages award will be much greater than it would be under current law.

#### E. TASTE FOR RISKY ACTIVITIES

Suppose a television photographer is in a helicopter hovering over a race track where stunt car drivers are practicing for an upcoming event. He knows he is about to run out of fuel but negligently remains above the track to shoot more footage. As a result, the helicopter crashes and kills two of the drivers. The drivers' estates bring suits for wrongful death. The television station argues that the population put at risk was composed of daredevils,

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103. See Viscusi, *supra* note 29, at 196 (arguing that a 10% discount rate "will make little difference unless the age differences are stark").

104. See Cohen, *supra* note 48, at 332 ("older people are usually assumed to be much more cautious than the young").

105. Cf. Kunreuther, Sanderson & Vetschera, *A Behavioral Model Of The Adoption Of Protective Activities*, 6 J. ECON. BEHAV. & ORGANIZATION 1, 10-12 (1985) (arguing that subjective evaluation of risk depends, to a large extent, on interpersonal influence and past experience).

and that daredevils must not value their lives very highly because they are willing to risk death every day.

It is equally likely, however, that daredevils simply love risky activities. Just as the ballet makes life valuable to some people, driving stunt cars made life valuable to these decedents. In other words, it may be that the stunt car drivers place the same price on risk as other members of the population, but their vast enjoyment of stunt car driving offsets the risk they incur. Many people find high-risk voluntary recreational activities to be quite enjoyable but would nevertheless demand a high price before they were willing to have a similar risk imposed upon them.

There are ways to determine whether individuals who have a taste for risky activities simply derive immense utility from those activities or whether they place a smaller value on avoiding risks of death. One way would be to observe what these individuals are willing to pay for safety gear. Careful studies could successfully separate the risk component of the activity from the enjoyment of the activity.<sup>106</sup> Another way would be to observe how much these individuals would demand to incur a risk unrelated to their high-risk voluntary recreational activities. If these individuals simply enjoy certain risky activities, then we would expect no disparity in damages awards. If instead they generally place a smaller value on avoiding risks of death, then the hedonic damages awards will be smaller for daredevils. A smaller award would be justified to create proper incentives for potential tortfeasors.

#### F. PRE-ACCIDENT PHYSICAL CONDITION

Under present law, if a decedent's earning capacity was diminished because of a preexisting physical handicap or ailment, the damages award will be diminished. Under this note's proposal, the damages award would be smaller if the population put at risk is composed of individuals who are so incapacitated that they are unable to enjoy some or many of life's pleasures.<sup>107</sup> For some, this would be unacceptable. On the other hand, in an analogous context, virtually everyone would agree with this result. For example, suppose tortfeasor *A* negligently causes serious permanent injury to an individual, leaving him unable to participate in many activities. Suppose tortfeasor *B* later causes further injury to the same individual. We would

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106. For example, if polo players derive no utility from wearing safety helmets beyond the knowledge that they are reducing their risk of dying, then the price they are willing to pay for helmets is purely a reflection of their value of risk reduction. If the population put at risk consists solely of polo players, then observing their willingness to pay for helmets will produce a better hedonic damages measure.

107. For example, if children with Down's syndrome are generally content with life, we would expect their damages awards to be the same as those awarded for other children. However, to the extent that Down's syndrome children have a shorter life expectancy than children not afflicted with Down's syndrome, the damages award will be lower.

not hold *B* responsible for both injuries to the individual because we think *B* should not have to pay for injuries that he did not cause. If, instead, *B* killed the victim, then *B* should still not be held liable for the portion of the victim's loss of life's pleasures that can be attributed to *A*'s previous activities.

#### G. SUMMARY

A damages rule that holds tortfeasors liable for the average value of life that the decedent has lost, as measured by the willingness to pay approach, is preferable under both an efficiency criterion and a criterion of fairness or equality. By replacing damages awards based on lost income, the proposed valuation will reduce the existing disparity in awards between various wealth classes, races, and genders.<sup>108</sup> To the extent some of the disparities in awards do remain, as for example with respect to decedents who had an impaired ability to enjoy life, they are disparities that exist and are thought to be justified under the present method of valuation.

#### VI. CONCLUSION

Under the present law of wrongful death damages, the airplane engine manufacturer in the opening hypothetical would not be held financially responsible in any way for the death of John Doe, no matter how blameworthy its actions or how desperately John Doe loved life. By not holding tortfeasors liable for decedents' lost enjoyment of life, we create incentives for tortfeasors to take an inefficiently low level of care when they engage in activities that impose a risk of death on others. Therefore, society should encourage economists to conduct more reliable studies on the valuation of human life as exhibited by individuals' willingness to bear risk. With these studies, the courts can begin to award damages that will create more efficient incentives. If, instead of evaluating the expected future income of the decedent, the courts concentrate on the value of lives put at risk as a result of tortious activities, the present inefficiencies and disparities in damages awards will be reduced. This result is also preferable under a fairness criterion because tortfeasors will be less likely to concentrate their risky activities on segments of our population with smaller future incomes.

The task of placing a dollar value on human life may not be a pleasant one, but in the end it would be life-affirming. Fewer people would die needlessly

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108. See Abel, *supra* note 82, at 210 ("inequalities of wealth and income should not be reproduced in the level of compensation, for this would maintain those inequalities . . . and reaffirm them symbolically").

if our state legislatures and courts would take the price of death more seriously. This can only be done efficiently by recognizing a price of life.

*Erin A. O'Hara\**

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