

HOW MUCH IS A LIFE WORTH? AN ANALYSIS OF THE PROBLEM OF VALUING HUMAN LIFE IN PUBLIC POLICY

THOMAS SIU

Abstract

While we often say that a price tag cannot be put on human life, at some point, public policy must do precisely that. In the contexts of government regulation and wrongful death litigation, monetary values are necessarily assigned to individual lives either saved or lost as the result of government or individual action. As such, policymakers and litigators ought to conduct their valuations of human life in a manner that respects human dignity. This study will first evaluate the utilitarian measures for calculating the value of a statistical life (VSL), including both the willingness-to-pay (WTP) and human capital (HK) approaches, and how this approach plays out, particularly when used to evaluate federal regulatory policy. It will then turn to an examination of the casuistry of jury decisions in wrongful death litigation and whether noneconomic damage caps interfere with the proper functioning of that casuistry. Specific examples in both the regulatory and litigation contexts will inform this study's analysis and allow for a deep examination of the principles underlying valuation decisions in both areas. Finally, this study will provide an overall critique of valuation measures and how they can be employed to provide useful data for making policy decisions while still respecting the dignity of the human person.

Introduction

While we often like to think that no effort is too much to save a life, at some point attempts to preserve life cost resources that could be better allocated to preserve more lives elsewhere. However, without having some valuation system, this type of cost-benefit calculus is impossible to perform.

Both regulators and litigators must make these valuation decisions. Jury decisions assessing the value of lives lost must also examine the circumstances of each situation and attempt to provide compensation for the loss of life. The structure of the jury system, and the nature of the decisions it makes possible, closely aligns to the ethical framework of casuistry, as it seeks to apply general principles to specific circumstances. With the introduction of various tort reform measures such as noneconomic damage caps, additional ethical questions arise over whether it is appropriate to interfere with this casuistry.

However, the necessity of valuation systems in regulatory and litigation contexts does not insulate those systems from challenges – specifically, public policy must combat the tendency to view human beings solely in economic terms. As a result, the ethical questions surrounding valuation systems include the threshold question of whether values can be assigned to human life without rejecting or diminishing the inherent value of the human person.

This study will examine utilitarian measures for assessing the value of a statistical life (VSL) and its use in the federal regulatory context. It will then evaluate the casuistry of jury decision-making in the wrongful death litigation context. The study will finally turn to evaluating these measures holistically and set forth a way in which valuation measures can be used while still respecting the dignity inherent in the human person.

Literature Review

Assessing a monetary value to human life has always been problematic. In 1913, Dr. Charles Chapin argued that it was unwise to focus the public health field on attempting to assign a monetary value to human life. However, the majority of those who evaluate these attempts generally assume that such an inquiry is justified and instead question which methodology is most useful for calculating the benefits from reduced loss of life (Rice & Hodgson, 1982). Indeed, Blomquist specifically argued that public policy must always measure the benefits of life-saving efforts to efficiently allocate scarce public resources (Blomquist, 1981). As a result, most evaluations of how public policy assesses values to human life do not question whether such approaches are morally problematic; rather, these evaluations examine the veracity of each particular assessment method. Nonetheless, some still question the efficacy

of relying on utilitarian cost-benefit analysis to make major policy decisions, such as William Gorham, the former Assistant Secretary of the Department of Health, Education, and Welfare, who observed, “The ‘grand decisions’ – how much health, how much education, how much welfare and which groups in the population shall benefit – are questions of value judgments and politics. The analyst cannot make much contribution to their resolution” (Wallace, 2012, p. 18).

There are numerous methods which attempt to assess economic values to human life, as Brannon noted in his 2004 overview of each type. Two main categories exist. Rice and Hodgson (1982) labeled these categories the “human capital” and “willingness-to-pay” approaches (p. 536). Gold and van Ravenswaay (1984) applied this same dichotomy, though they recognized the possibility of combining the two in an adjusted approach. The first focuses on values that individuals place on their own behavior, while the second attempts to provide an external, objective framework. Researchers typically view the willingness-to-pay (WTP) approach as being most consistent with standard cost-benefit analysis because while human capital (HK) approaches have a theoretical possibility of bringing greater detail to the valuation, they often require extremely difficult comparisons which cut across different spheres of analysis (Abelson, 2003). Most researchers use both WTP and HK approaches to engage in cost-benefit analysis. Landefeld and Seskin (1982) provided an excellent example of both methods of analysis, including comparisons between the two methods.

Each methodology seeks to provide the value of a statistical life (or VSL), which is essentially the single best value to place on a human life (Brannon, 2004). Researchers refer to statistical lives because it allows them to break down risk and evaluate percentage changes in risks of specific harms (typically death) rather than examining specific, identifiable deaths (Abelson, 2003). Based on the VSL, researchers can apply a discount rate to calculate the net present value of any particular individual’s statistically expected future earnings (Landefeld & Seskin, 1982). This in turn can be used to produce a more precise figure than the VSL because it accounts for a person’s age.

Once a given method has been selected and operationalized, the data it provides can be used to inform decision-making processes. The utilitarian cost-benefit analysis is often applied to regulatory environments to allow state and federal regulatory systems to engage in some form of calculus about whether a given regulation should be adopted, rejected, or modified. Wallace (2012) noted that such utilitarian calculus can inform decisions ranging from environmental regulations enforced by the EPA to workplace safety requirements issued by the Occupational Safety and Health Administration (OSHA).

While the WTP and HK models are often relied upon for public policy analysis, they do not apply in all contexts. For example, methodologies for evaluating federal

regulatory systems are rarely the same as those applied to the context of wrongful death litigation (Peebles & Harris, 2015). Instead, juries in wrongful death cases are more fact-specific than generalized – often because of statutory requirements (Peebles & Harris, 2015). When applied to catastrophic (but non-fatal) injuries, jury decisions can also account for remaining quality of life, which itself requires some understanding of the value of a whole life (Torpy, 2004). In the end, the literature examining jury awards seems to suggest that this system relies more heavily on casuistry than on the utilitarian cost-benefit analysis that is commonly associated with the valuation of human life in regulatory actions.

The September 11th Victim Compensation Fund is an example of an organization that bridges the gap between statistical measures applied to regulatory policy and fact-specific measures applied to wrongful death litigation (Peebles & Harris, 2015). This fund created a compensation grid based on factors about the deceased individual that could result in payouts ranging from \$250,000 to \$7 million (Torpy, 2004). In particular, the Victim Compensation Fund included consideration of the economic losses of the victims (Peebles & Harris, 2015), rather than assessing a single value to persons based on the VSL adjusted for age. Because of its specific application of general guiding principles, the Victim Compensation Fund appears to fit within the ethical framework of casuistry.

Data and Methods

This study utilizes a primarily qualitative evaluation of the competing methodologies used to assess the financial value of human life. Since some of these competing methodologies are quantitative in their nature, quantitative methodologies will inherently be under examination. However, this study seeks to evaluate these competing methodologies based on factors other than the specific values that they assess. As such, the root questions will be qualitative, as they will delve into the potential problems with each methodology, the impact of each methodology on real world decision-making, and the ethics of utilizing each valuation system. This study therefore assumes that quantitative measures are inapplicable to answering at least some ethical dilemmas; in other words, this study begins with the premise that ethical analysis based on quantitative methodology is logically subsequent to a qualitative determination that quantitative methodology is applicable in the first place. While this is a key assumption, it is justified by the concept that no ethical theory should ever be able to ‘pull itself up by its own bootstraps.’ Rather, a method for making moral decisions should be justified independently of its own ethical framework.

Therefore, this study will examine the various utilitarian models (such as the WTP and HK models) and the literature critiquing them. As previously noted, some

quantitative analysis will be necessary in order to comprehend these methods and conduct a meaningful examination of their strengths and weaknesses. By evaluating scholars who advocate for the WTP and HK models, the study will be able to conduct a primary analysis of the advantages and potential pitfalls of each. Such an examination will allow this study to draw conclusions about the strengths and weaknesses of the WTP and HK models based on both the primary and secondary analysis.

Many scholars have studied jury decision-making dynamics, both in terms of outcomes and methods. Since outcome-based studies are particularly prevalent in the context of valuation systems, this study will largely focus on conducting a qualitative analysis of these outcomes. Nonetheless, when possible, the quantitative decisions of juries will be subjected to examination to paint the fullest possible picture of jury valuation decisions. These decisions seem to fit most clearly within the ethical framework of casuistry because of their relative flexibility compared to the utilitarian calculus employed in regulatory valuation systems. However, tort reform measures (especially damage caps) may interfere with this casuistry. Accordingly, this study will examine whether tort reform measures interfere with the casuistry of jury decisions in any meaningful way and, if so, whether they defeat the ethical judgments made under the casuistry of jury decision-making.

In the special issues section, this study will examine one particular case study – the September 11th Victim Compensation Fund – and determine how its compensation grid best fits into the varying ethical frameworks that could be relied upon to make valuation decisions about human life. Once again, this will be primarily qualitative analysis of quantitative data. This study will then examine the question with which any valuation system must wrestle: does attempting to place a monetary value on human life undercut human dignity? This is a qualitative ethical question, and while such an examination could potentially stray far from public policy and into the realms of philosophy or theology, this paper will attempt to limit the extent to which other disciplines are introduced unnecessarily and maintain the focus on the ethical considerations in the public policy realm. Finally, if valuation systems are determined not to be inherently unethical because of a devaluation of the dignity of the human person, this study will conduct a similar analysis of which factors may be legitimately used in such valuation decisions. While this analysis will necessarily incorporate other disciplines, it will continue to focus on the application of these other disciplines to the public policy realm.

Historical Usage

Systems for assessing values to human life have existed for a long time. In the United Kingdom, for example, the 1934 Law Reform Act ensured that most causes of

action could be raised after a person's wrongful death by his or her estate (Symmons, 1938). This had the net effect of allowing juries to consider how much should be awarded in damages to 'replace' deceased persons, such as a 21-year-old worker, whose family was awarded about £1900 in *Walton v. Jacob* (Symmons, 1938). Notably, in *Walton*, the jury was instructed that "it was not merely that no sum was large enough to compensate a man of position for submitting to a violent end, but that the mind recoiled from such a problem," which illustrates that misgivings about valuing human life have been present for at least as long as the attempts to do so themselves (Symmons, 1938).

The American history of assessing the monetary value of human life in wrongful death litigation is about as old as the nation itself. One of the earliest reported cases is the 1794 case of *Cross v. Guthery*, from a Connecticut intermediate appellate court, where the jury awarded £1000 for the wrongful death of a woman in what may be the first recorded medical malpractice case in the independent United States.

The precise moment when utilitarian calculus entered the regulatory environment is not clear. Despite that, Chapin's 1913 article referenced undated (and apparently unavailable) works by Farr, Fisher, and Leighton, who each created their own methodologies for assessing more generalized financial values of the kind that would be useful for regulatory analysis (Chapin, 1913). Obviously, this means that at least some scholars were performing a strand of utilitarian analysis in the early 1900s, though the prevalence of such judgments cannot be accurately assessed without access to additional data. Some scholars trace the start of the use of VSL data in the regulatory context (and particularly the HK approach) to Fein's 1956 book *Economics of Mental Illness* (Gold & van Ravenswaay, 1984). Perhaps the increase in the scope of government during the New Deal had time-lagged effects that increased the need to evaluate the effectiveness of regulatory programs, or perhaps some other factor was responsible for the fact that this analysis does not appear to have been either preserved by other works.

In the late 1970s and early 1980s, the use of VSL analysis in the regulatory context exploded, seemingly driven in large part by the independent work of Viscusi and Bloomquist. This boom set the stage for other scholars to enter the scene and challenge the preconceptions of WTP and HK analysis and attempt to improve the models to more accurately reflect human decision-making processes and to promote greater regulatory efficiency.

Modern Valuation in the Regulatory Context

Utilitarian Methodology

Cost-benefit analysis can take multiple different forms based on what precisely a regulator is attempting to measure, whether the costs are known or not, and

whether the costs are financial in nature. However, even when costs are not financial in nature, such as the loss of human life or risk of serious physical harm, financial values can nonetheless be assessed to enable a consistent cost-benefit calculus. However, seemingly straightforward risk-risk analysis – the most logical system to use when comparing risk of harm to comparable entities – is actually not quite as simple (or useful) as it seems. Stone (1982) explained the problem by looking at the nonfinancial risk balancing equation for risk-risk analysis:

$$D_a = P(R_a \pm M_a)$$

In the above equation, D represents the risk of a certain unfavorable outcome (in Stone's example, death), P represents a given population that is assumed to be stable, R is the risk of death from the particular course of action, and M is the margin of error (MOE) of the analysis (Stone, 1982, p. 263). Thus, in order to perform utilitarian cost-benefit analysis from a pure risk-risk (nonfinancial) paradigm, the value of D must be compared for two or more potential policies:

- 1) $D_a = P(R_a \pm M_a)$
- 2) $D_b = P(R_b \pm M_b)$

Whichever policy (A or B) provides the lowest D value is the one that provides the lowest risk and therefore should be adopted. While this is quintessential utilitarian calculus, it does not present enough information to adequately inform public policy. First and foremost, the equation assumes that the R and M values can be known with a scientifically acceptable level of reliability, which is unclear at best (Stone, 1982). Second, the value of P is assumed to be stable and held constant – which Stone notes is often unrealistic (Stone, 1982). Third, the risk-risk equation provides no way to compare risks of different potential harms – it can only compare the probabilities of the same risk of harm. Fourth, even if the R and M values could be known with precision, the M value could still be sufficient to deny certainty as to which is the proper course of action (Stone, 1982). To illustrate this, assume that D represents the risk of death in a certain population if one of two possible policy alternatives is adopted. Further assume that P is held constant at 1,000, R_a is held constant at 0.05, M_a is held constant at ± 0.01 , R_b is held constant at 0.04, and M_b is held constant at ± 0.03 :

- 1) $D_a = P(R_a \pm M_a)$
 $D_a = 1,000(0.05 \pm 0.01)$
 $40 < D_a < 60$
- 2) $D_b = P(R_b \pm M_b)$

$$Db=1,000(0.04 \pm 0.03)$$

$$10 < Db < 70$$

As the above example illustrates, even in some cases where the exact risk and MOE is known with a high degree of precision, the risk balancing equation is still unable to indicate which policy will produce better results. Either policy could produce fewer (or more) deaths than the other. As such, something that can permit cross-cutting comparisons between different possible risks is necessary. Financial-based risk analysis fills this need. Of course, this will not solve all problems associated with pure risk analysis – any utilitarian calculus necessarily requires knowledge of all consequences of an action to be able to perform accurate ethical calculus, which is an informational problem that will not be solved by merely adding dollar values to the assessments. In the end, the informational problem is a significant factor limiting the usefulness and accuracy of utilitarian methodology for calculating the value of human life.

As a result of the shortfalls of risk-risk analysis, scholars and agencies have engaged in the now-traditional task of assigning a monetary value to human life. In the regulatory context, these figures change with inflation and can shift by regulatory agency or even by the context of a given regulation within the same agency. For example, the Office of Management and Budget (OMB) observed that the Food and Drug Administration (FDA) simultaneously used \$2.5 million as the VSL for tobacco regulations and \$5 million for regulations governing mammograms (Wallace, 2012). However, researchers attempt to provide more consistent values for use in scholarly research. In spite of these attempts at consistency, though, researchers typically produce numbers that “vary wildly between studies,” with numbers ranging from \$2 million to \$7 million (Brannon, 2004, p. 62).

The financial models can then be used to determine whether a given regulation imposes greater costs than society is willing to bear for the increase in safety that it produces. This analysis must consider the impact of the regulatory system on productivity within private enterprises, since private enterprises can be harmed by unexpected or excessive shifts in the regulatory structure (Viscusi, 1983). It is vitally important to perform this analysis carefully, because the impacts can be substantial; one scholar suggests that approximately 30% of the decline in domestic manufacturing growth can be attributed to OSHA and EPA regulations (Gray, 1987).

Financially-based utilitarian analysis seeks to introduce a measure that can be manipulated based off a variety of factors to account for additional variables that could impact the moral calculus of regulatory actions. While there are many different methods for performing this calculus, this study will examine the two most prominent: the willingness-to-pay (WTP) model and the human capital (HK) model.

Willingness-to-Pay Model

The willingness-to-pay (WTP) model is sometimes also referred to as the revealed preferences method (Brannon, 2004). This method provides individuals with the choice of how much they would be willing to pay in exchange for a small percentage decrease in their overall risk of death. Notably, this value does not provide an indicator of the total value of the individual's life but rather of a given reduction in probability (Gold & van Ravenswaay, 1984). As a result, valuation metrics would have to then make a determination based on this probability and the valuation, which at first seems fairly simple. Landefeld and Seskin (1982) used the following simplified equation to illustrate how total WTP produces a VSL:

$$(AN)/(RN)=V$$

In this equation, A is the aggregate WTP of all members of a population for a given reduction in risk, N is a constant population, R is the risk unit, and V is VSL produced by the equation (Landefeld & Seskin, 1982). Landefeld and Seskin then referenced Jan Paul Acton's 1973 study, which found that a particular population was willing to pay \$76 (A) for a 0.002 reduction in the risk of death by heart attack (R):

$$\begin{aligned} (AN)/(RN) &= V \\ (\$76N)/(0.002N) &= V \\ (\$76)/(0.002) &= V \\ \$38,000 &= V \end{aligned}$$

In theory, this is a comprehensive indication of the value that individuals place on their lives, so the VSL for this population would be just \$38,000 (Landefeld & Seskin, 1982).

However, there are some indications that the WTP model may not provide an accurate measurement of the value that individuals place on their lives. Most significantly, the WTP increases in a nonlinear fashion as the risk increases, because as study participants are asked to get closer and closer to certain death, eventually no compensation system will provide sufficient payment for the participant to accept the risk (Brannon, 2004; Gold & van Ravenswaay, 1984). Unfortunately, the WTP-VSL equation assumes that the risk acceptance structure behaves in a linear way, so a person would be predicted to pay 10 times what they would be willing to pay to avoid a 10% risk of death than to avoid a 1% risk of death; however, because of the nonlinear exponential increase in the WTP to avoid a risk of death, the WTP-VSL equation cannot provide an accurate VSL. Additionally, because these discrepancies are present in multiple different subsets of the WTP model, it appears that the nature of the human risk acceptance structure is the cause of the nonlinear exponential

increase in the WTP to avoid a risk of death, rather than some other factor such as self-sorting (Brannon, 2004).

This nonlinear increase may help explain why VSL assessments can range wildly. Anecdotally, Landefeld and Seskin (1982) reported that three studies they reviewed assessed VSLs measured through the WTP approach at \$38,000, \$1.2 million, and \$8.4 million. Others likewise noted that WTP measurements can produce VSLs that range from zero or even negative values to over \$100 million (Brannon, 2004).

Another significant problem with the WTP-VSL equation is that smaller risks may not be easily understood or visualized by the general public when asked to assign a value to the avoidance of a particular risk. As a result, individuals report different values than can be observed from their actual behavior outside the survey setting (Landefeld & Seskin, 1982). If participants do not understand their risk, they cannot be expected to accurately determine their preferences (Gold & van Ravenswaay, 1984). Studies also indicate that it is particularly hard for individuals to consistently evaluate small changes in risk, which can also complicate the analysis and may prevent researchers from developing an accurate understanding of the functioning of the risk acceptance curve (Gold & van Ravenswaay, 1984).

Further, perceptions of risk may impact valuations more than the actual risk reported to respondents. Gayer, Hamilton, and Viscusi (2000) performed a WTP analysis based on housing prices near EPA Superfund sites in Michigan, which found that the release of EPA reports on the environmental and health risks of a site had as much as a \$700,000 impact on the VSL obtained through WTP metrics. If perceptions of risk are more important than the actual risk itself, it would be nearly impossible to measure the VSL using the WTP model.

Attempts to evaluate individual WTP through surveys or other metrics also pose measurement problems. Individuals may report one value but act as if another value is controlling. Participants are likely to understate their WTP if they believe that the information they provide will be used to create a payment structure and are likely to overstate their WTP if they believe the information will be used to create a benefit structure (Gold & van Ravenswaay, 1984). Essentially, people want to obtain the greatest personal benefit for the least personal cost, so they will (consciously or subconsciously) attempt to manipulate the process into providing what they want. Studies that have evaluated ways to control for this bias have suggested that some methods might be effective, but others that are more often relied upon are clearly not (Blumenschein, Blomquist, Johannesson, Horn, & Freeman, 2008). Thus, not every cost evaluation used in WTP analysis will rely on accurate data.

These problems with WTP analysis suggest that something more objective is needed, whether it is adding some element of third-party analysis to WTP or

transitioning completely from WTP to HK measurement systems. Some researchers have attempted to add criteria to make these determinations more accurate and consistent. Aldy and Viscusi (2008) proposed one such modification to WTP that seeks to consider the effects of age on VSL. This solution is to account for age based on the assumption that “[a]s a worker ages, there are fewer years of remaining life expectancy, implying lower benefits for a given risk reduction, which should reduce the worker’s willingness to pay to reduce that risk” (p. 574). While this does seem to provide data that is more accurate in accounting for other areas that pure risk analysis cannot consider and can provide a more objective metric for WTP analysis, it is ultimately unsatisfying because it makes a key assumption about human behavior without any persuasive justification for such an assumption.

Others raise potential factors that are relevant to both the WTP and HK models, such as Shogren and Stamland (2002), who argued that unequal skill in coping with risks results in different individuals having values that are misrepresented by the generalized VSL. They specifically argued that VSLs are typically skewed upward because of the failure of other measures to properly account for this skill. Another potential factor is a given worker’s relative position within the wage bracket for his industry and job, as Kniesner and Viscusi (2005) proposed. However, this can be problematic, as it can be very difficult to determine what a worker’s economic reference group is in order to determine what his or her relative position actually is (Kniesner & Viscusi, 2005).

Human Capital Model

When operating under the HK model, VSL is typically calculated based on future productive capacity, which is measured by the net present value of an individual’s lifetime expected earnings (Landefeld & Seskin, 1982). Put even more simply, it pegs an individual’s value to their financial earnings during their lifetime (Wallace, 2012). The HK approach assumes that the value that individuals add to society can be evaluated solely by their contribution toward gross national product through production (Gold & van Ravenswaay, 1984). As a result, HK analyses do not account for noneconomic activities such as recreation and leisure and can even ignore pain and suffering (which are often factors in compensation for wrongful death litigation, as will be evaluated later) (Rice & Hodgson, 1982). HK can take into consideration future consumption of the deceased individual by subtracting total forgone future expenses from total lost future wages to produce the total net loss of the individual (Gold & van Ravenswaay, 1984). HK can also account for differences between demographic groups (Wallace, 2012).

HK analysis does have a substantial advantage over the WTP approach in that it can provide estimates of the net present value of lost future wages with a greater degree of reliability and consistency than the WTP approach can, as it avoids

the methodological problems revealed in the WTP approach previously (Rice & Hodgson, 1982). At least in theory, this would result in a more workable metric that can produce more consistent results and thus enable analysis of regulatory costs across different contexts.

The WTP approach appears more attractive than the HK approach to some researchers because of its theoretical ability to account for the nonfinancial motivations that HK analysis ignores (despite the fact that WTP seems unable to operationalize this measurement). This is one of the key drawbacks of the HK approach, because by ignoring intangible motivations, it fails to provide an accurate assessment of human behavior and thus to produce a model that can accurately assess financial values of individuals (Gold & van Ravenswaay, 1984). As a result, HK assessments may underestimate the total impact of death (Rice & Hodgson, 1982). For example, it would seem extremely difficult to calculate the financial impact that the loss of a parent would have on a young child – which is an assessment that HK does not even attempt to make.

In addition to failing to account for noneconomic activity, the HK model is also not ideal because it does not recognize that different individuals have different attitudes toward risk – which the WTP approach assumes can be controlled for by evaluating the aggregate willingness to pay of a particular group. The same methodology that allows HK to produce more exact economic calculations also means that it must standardize more factors, even though many individuals will not behave within the assumptions the model makes.

The ability of the HK model to engage in demographic breakdowns is another point of ethical contention. If individuals of a certain demographic are likely to have higher incomes than member of other demographics (such as white, middle-age males compared to young minority females), that seems to suggest that some demographics are worth more than others (Gold & van Ravenswaay, 1984). To break demographics down even further, do certain consumptive activities that tend to increase income later in life (undergraduate or graduate education) impact an individual's worth? By extension, this could mean that an individual's value is determined at least in part by the skills they possess (Shogren & Stamland, 2002).

While the HK model solves some of the methodological problems posed by the WTP model, it opens the possibility of many other problems because of the unique limitations of the factors it considers. Because it fails to account for noneconomic factors which may influence the value individuals place on themselves and their family, HK is likely to underestimate the true impact of mortality (Landefeld & Seskin, 1982). However, some argue that because both WTP and HK have flaws in different areas, the best solution is to view them as complementary rather than competing measurement systems, as they measure different elements of value (Rice

& Hodgson, 1982). The key problem, as some scholars put it, is to balance accuracy and administrability (Posner & Sunstein, 2005).

Having completed the analysis of the various methodologies used for calculating the financial value of human life, this study now turns to an examination of valuation methods in a different context: wrongful death litigation.

Modern Valuation in the Litigation Context

Casuistry of Jury Decisions

Jury decision-making dynamics are known for being inconsistent from case to case. One scholar found that jury awards for injuries involving quadriplegia and other serious injuries requiring lifelong care ranged from a low of \$147,000 to a high of over \$18 million (Bovbjerg, Sloan, & Blumstein, 1989). In part, this may be due to the fact that the tort system focuses on individual differences between cases and attempts to provide specifically tailored compensation on a level that would be unthinkable in the regulatory context, which relies on one uniform value being assessed to each life saved by a given policy (Posner & Sunstein, 2005). Some argue that this inconsistency is a harmful result of each jury being isolated from the compensation decisions that any other jury has made and thus suggest that some of the concepts from the regulatory system be brought into litigation to create more uniform results (Lahav, 2012). Others argue that the regulatory system should attempt to provide more individualized assessments such as those that occur in the realm of civil litigation (Posner & Sunstein, 2005).

As a whole, juries have wide discretion in determining how much to award a successful plaintiff, though they may receive more substantive guidance from the litigants and their expert witnesses when dealing with economic damages. When juries consider how much to award to a given victim, both parties can provide expert testimony and arguments in favor of and in opposition to any particular method of calculating economic damages (Bovbjerg, Sloan, & Blumstein, 1989). However, when evaluating noneconomic damages, juries receive little guidance other than the subjective approaches that may be presented by the attorneys for evaluating the severity of pain and suffering and thus the damages for such (Bovbjerg, Sloan, & Blumstein, 1989). The problem with this is that it is particularly difficult to assess a monetary value to a non-monetary injury, particularly when there is no objective system for measuring the severity of noneconomic damages (Geistfeld, 1995). Some jurisdictions permit juries to consider a variant of WTP analysis in wrongful death cases called hedonic damages, which is used in an attempt to calculate the loss of pleasure from life, but not all jurisdictions accept this methodology (Geistfeld, 1995). Some commentators argue that the lack of an objective standard also hampers judicial review of jury decisions as part of

an attempt to ensure greater uniformity of jury decisions (Bovbjerg, Sloan, & Blumstein, 1989; Geistfeld, 1995).

In spite of the criticisms of the jury system of compensation, another factor suggests that the tort system has a different purpose than the regulatory system, so there may be compelling reasons to have different methods for valuing human life in the two different systems. Posner and Sunstein (2005) argued that the purpose of the tort system is to both provide deterrence and compensation, which means that the administrative nature of the regulatory system is focused on maintaining optimal risk levels and deterring actions which increase risk above these optimal levels. As a consequence, the tort system has another goal beyond merely ensuring regulatory efficiency – it also seeks to account for the noneconomic factors that HK and WTP analysis often ignore, in addition to the deterrent role that punitive damages serve to dissuade defendants from engaging in the same tortious conduct. Thus, it actually seems that the more individual case-focused orientation of the jury award system is more compatible with the ethical framework of casuistry than with the utilitarian framework that is applicable to the regulatory system.

Even though they both attempt to obtain valuations for individual human lives, if the regulatory system and the jury award systems have fundamentally different goals, it seems logical that they would operate in fundamentally different ways. Perhaps, then, the different strengths of various methods of calculating economic value are useful precisely because they provide a diversity of ways to determine what compensation is appropriate rather than relying on a single universal concept that is applied across the board regardless of the facts of a given circumstance. Rather, they seek to provide a myriad of options that can be applied whenever it is appropriate to use one or more of them in a given set of factual circumstances. Thus, those who argue that the systems should be combined may be missing a fundamental point, namely, that the systems are different for a reason and that attempting to combine the two (or, in some cases, subordinate one to the other) runs the risk of depriving relevant decisionmakers of the methodology that may be most useful for finding the financial value of individuals in the circumstances they face. Perhaps the best solution is not to pick one valuation system to use all the time but rather to pick which valuation system is best suited for the task we are attempting to accomplish. When attempting to compensate the survivors of a wrongful death victim, attempting to force each case into a one-size-fits-all compensation scheme would risk removing the nonfinancial elements from the equation and potentially deprive the law of its humanity. Such a system, while perhaps suited for the regulatory environment that seeks to make broad decisions about statistical probabilities, is entirely unfit for a civil justice system focused on providing the right compensation for each particular set of victims. As such, any attempts to forcibly insert more utilitarian principles into the civil jury system

should be viewed with skepticism because they threaten to destroy the casuistry upon which it relies.

Special Issues Analysis

The analysis of these two systems leaves several important questions still outstanding, most importantly, whether these systems are compatible with respecting the inherent value in human life. This section seeks to explore this question and to evaluate a case study that illustrates the interplay between the two different applications of valuation methodologies.

September 11th Victim Compensation Fund

Valuation systems need not always fit neatly into the bifurcated system of the utilitarian system suitable for the regulatory context compared against the casuistry of the civil jury award system. Sometimes special circumstances can result in the creation of unique systems designed to compensate those who have suffered loss on a massive scale, such as the congressional compensation scheme for victims of the September 11th terrorist attacks: the September 11th Victim Compensation Fund. The Compensation Fund gave a substantial amount of discretion to Special Master Kenneth Feinberg, who created the Fund's compensation grid (Lascher Jr. & Martin, 2008). In doing so, he combined the utilitarian approach of regulatory policy with the casuistry of jury awards to bring a greater degree of uniformity and consistency to the casuistry-based system, because the compensation grid used a calculation to replace lost future wages by comparing adjusted income through the expected date of retirement (Posner & Sunstein, 2005). Noneconomic damages were set at fixed levels for survivors, and total compensation for both economic and noneconomic damages ranged from a low of \$250,000 to a high of \$7.1 million (Posner & Sunstein, 2005).

Because this system has neither the deterrent intent of the federal regulatory system nor the extreme focus on particular cases, it is able to take parts of each system and combine them into a coherent whole that has elements of each system but is nonetheless distinct from each. It shares the focus on providing uniform values and structure that the regulatory system seeks to provide, while also retaining some of the casuistry that the jury award system has by allowing for different outcomes based on the circumstances of the victim. The methodology utilized by the Compensation Fund would be unlikely to serve as effectively in either the regulation role or the litigation role, but because the circumstances leading to the creation of the Fund mixes elements of both areas, the Fund's mix of the two methodologies is able to create a system that effectively operates to provide just levels of compensation to victims.

Respecting the Inherent Value of Life

Attempts to assign an economic value to individuals run an inherent risk of reducing human value to merely economic terms and devaluing the noneconomic dignity possessed by the human person. As a result, we must ask ourselves the threshold question of whether it is ethical to engage in these sorts of valuation decisions in the first place. Traditional Judeo-Christian ethics contains a strong element of the value of each human being – as one author puts it, “A person is more than a demographic statistic... more even than an economic and political being... To treat a person as a person, to respect her rights as a person, therefore respects both God’s handiwork and God himself” (Holmes, 2007, p. 89). Thus, Christian ethicists may understandably shy away from performing economic valuations of human life.

Indeed, even many non-Christian scholars argue that attempting to assign economic values to human life is not only dangerous but also entirely unnecessary. From the days of Chapin arguing that an economic focus on the value of human life would be harmful (Chapin, 1913), a number of scholars have been critical of assessing financial values to human life. Broome (1985) argued that this system is unnecessary and undesirable:

If we fix no definite economic value on life, the decisions will still get made as they always have. Like many other hard decisions, they have to be made without the guidance of clear criteria. If they are to be made well, what we most need to improve is the process by which they are made. We need sensitive and humanitarian decision-makers, who will face up to the full difficulty of life-and-death decisions. But putting a money-value on life helps to make the decisions seem mechanical and easy. We do not want our rulers to be sheltered by their experts from a full appreciation of their responsibilities. (p. 292)

Other scholars adopt the opposite extreme and argue that public policy must always examine economic values for life in order to efficiently allocate resources (Blomquist, 1981). These claims seem to be based on the idea that allocation of economic resources must be based on some economic measurements rather than based on noneconomic value judgments. To be sure, in some circumstances (such as wrongful death litigation), a value must be assessed. However, while these economic measurements may be useful (and even sometimes necessary), they can tread a dangerous path, one that leads too close to the devaluation of the inherent dignity of the human person. While they may not necessarily be ethically problematic on their face, they create the possibility of reducing humans to mere economic creatures. Further, with the problems these valuation systems have in the operationalization of

the measurement metrics, they may be of only limited use in the first place. As such, it seems that skepticism of economic valuation decisions may be warranted.

Conclusion

Attempts to assess a financial value to human life have grown increasingly more common over the past few decades with the expansion of the regulatory state. With more federal regulation, there is a greater need to evaluate the effectiveness of regulatory programs designed to preserve life to ensure that they are as effective and efficient as possible. Even outside this context, valuation decisions are also made in the context of wrongful death litigation by juries. These two different contexts rely on different evaluation methods because they are intended to produce different results based on the extremely different natures of the regulatory system and civil litigation. When elements of these two different contexts are present, a combination of the two systems can be effective at promoting the interests of all relevant parties, as the September 11th Victim Compensation Fund demonstrates. In the end, though, attempts to assign financial values to human life must take great care not to stray too close to dehumanizing persons by viewing them solely in economic terms without recognizing the noneconomic dignity that all human beings possess. When this extreme can be avoided, these valuations can be useful for regulatory analysis as well as for providing the victims in wrongful death claims some measure of financial security. When misused, though, these valuations threaten the humanity of the law by dehumanizing the people the law is supposed to protect.

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