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Compensable Nonmarket Services in Wrongful Death Litigation: Legal Definitions and Measurement Standards

Introduction

Many reports of *lost services* by some forensic economists include only *household services* such as cooking, washing dishes, doing the laundry, gardening, making home and home appliance repairs, purchasing necessary household goods, chauffeuring children, running errands, and similar simple production tasks. Child care may be included as a type of service but is often treated as a type of custodial babysitting service rather than as child rearing activities requiring significant skills and education for best performance. Frequently, forensic economic calculations of lost services based on this narrow conception of lost services show no difference between the value of services rendered by a mother with an eighth grade education and a mother with a college degree in the process of child rearing (Ireland and Ward 1991; Ireland 1992). This household services definition of lost services is not accurate, is narrower than what is legally required, and is inconsistent with the current state of knowledge in the field of human capital economics. Its only virtue is that it is consistent with the definition of "household services" in time

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use studies, which have different purposes than loss estimation for wrongful death litigation.¹

The conceptual issues involved in the meaning of lost services in wrongful death litigation are addressed in this paper. There are two primary criteria for what may be included and assessed as a lost service in an economist's calculation. First, the service must have a value that is independent of the person providing the service. Second, the service must be shown to have reasonable market equivalents in the commercial marketplace. In other words, the service must have been valuable even if provided by a stranger, and it must be closely similar to a service for which people do pay strangers in the commercial marketplace. This conception of lost services has four major implications that will be explained in this paper: (1) that "services" may be provided for adult children even though those adult children are separately domiciled; (2) that time use studies, which focus on narrowly defined production tasks, do not include many valuable services of the decedent that qualify within the legal definition; (3) that significant parts of what have been counted as personal consumption may, in fact, be necessary costs of service provision; and (4) that, as a result, calculations of lost services by many forensic economists are significant underestimates of the true economic value of lost services.

Instead of *household services*, the term *nonmarket services* of the decedent will be used in this paper. Household services carries an implication that services must be provided in or around the decedent's home whereas lost services may have been in the home or elsewhere. The meaning of lost nonmarket services for wrongful death litigation will be discussed primarily in the terms used in *Michigan Central Railroad Company v. Yreland* (1913) (henceforth *Yreland*),² a 1913 Federal Employers' Liability Act (FELA) decision of the United States Supreme Court. Nonmarket services will then also be discussed in terms of the Missouri Wrongful Death Act and recent court cases interpreting lost services in Michigan and New Jersey as other examples of state law. Implications of the broader meaning in law of nonmarket services in terms of the *personal consumption and maintenance* deduction will then be considered in this paper. Finally addressed will be *replacement cost* and *opportunity cost* methods for valuation of nonmarket services of decedents in light of the broader conception of nonmarket services developed in this paper.

The Conceptual Meaning of Nonmarket Services in *Yreland*

Both federal and state law distinguish between the intangibles of love, affection, grief and bereavement that survivors of a decedent might have experienced and the tangible pecuniary loss of services a decedent might have provided to persons bringing suit under wrongful death acts. The distinction between these categories is sometimes discussed in terms of tangibles versus intangibles and sometimes in terms of whether or not a "pecuniary standard" can be used in the valuation process. *Yreland* discusses the meaning of pecuniary in loss of services as follows (at 70-71, parentheses supplied, italics in original):

The distinguishing features of that act are identical with the act of Congress of 1908 (the 1908 Federal Employers' Liability Act) before its amendment: First, it is grounded upon the original wrongful injury of the person; second it is for the exclusive use of certain specified relatives; third, the damages are such as flow from the deprivation of the pecuniary benefits which the beneficiaries might have reasonably received if the deceased had not died from his injuries.

The pecuniary loss is not dependant upon any legal liability of the injured person to the beneficiary. That is not the sole test. There must, however, appear some reasonable expectation of pecuniary assistance or support of which they have been deprived. Compensation for such loss manifestly does not include damages by way of recompense for grief or wounded feelings...

The word "pecuniary" did not appear in Lord Campbell's Act, nor does it appear in our act of 1908. But the former act and all those which follow it have been continuously interpreted as providing only for compensation for pecuniary loss or damage.

A pecuniary loss or damage must be one which can be measured by some standard. It is a term employed judicially, "not only to express the character of the loss of the beneficial plaintiff which is the foundation of the recovery, but also to discriminate between a material loss which is susceptible of pecuniary valuation, and that inestimable loss of the society and companionship of the deceased relative, upon which, in the nature of things, it is not possible to set a pecuniary valuation." . . .

Nevertheless, the word as judicially adopted is not so narrow as to exclude damages for the loss of services of the husband, wife, or child, and, when the beneficiary is a child, for the loss of the care, counsel, training and education which it might, under the evidence, have reasonably received from the parent, and which can only be supplied by the service of another for compensation.

In *Tilley v. Hudson River Railroad*, 24 N. Y. 471 and 29 N. Y. 252, the court stated that "the word 'pecuniary' was used in distinction to those injuries to the affections and sentiments which arise from the death of relatives, and which, though grievous and painful to be borne, cannot be measured or recompensed in money. It excludes, also, those losses which result from the deprivation of society and companionship, which are equally incapable of being defined by any recognized measure of damages."

In clarification of this discussion, the court had earlier said (at 63): "If the care and guidance and advice of the father is of pecuniary value to the children, likewise is the care and advice of the husband of value to his wife." The court also added (at 73-74):

Neither "care" nor "advice" as used by the court below, can be regarded as synonymous with "support" and "maintenance," for the court said it was a deprivation to be measured over and above support and maintenance. It is not beyond the bounds of supposition that by the death of the intestate his widow may have been deprived of some actual customary service from him, capable of measurement by some pecuniary standard, and that in some degree that service might include as elements "care and advice."

The *Vreeland* court ruled that the lower court had been in error in instructing the jury to consider such services without specific evidence of the nature of the loss and some indication as to how it was to be measured in pecuniary terms. The decision established that a distinction must be made between lost services that would have pecuniary value irrespective of the relationship between the deceased and survivors and lost services that have value only because of the love and affection that existed between the decedent and the survivors of the decedent. The former are tangles that can be measured by a pecuniary standard, if such a standard can be shown to exist. The court is particularly concerned that some standard must exist if measurement is to be made by expert opinion. The latter are intangibles to be included with pain and suffering, loss of the enjoyment of life and other elements not subject to ease of direct monetary assessment. The *Vreeland* court indicates that even though such evidence was not provided in the lower court case being reviewed, it anticipated the possibility that care and advice provided between adult relatives might be "capable of measurement by some pecuniary standard."

It may be going too far to suggest that the *Vreeland* court had anticipated the *revealed preference theorem* in economics, which had

not yet been developed in 1913, but the court was clearly forward looking in terms of its anticipation that standards for measurement that did not then exist would be developed in the future – and that such standards, when they were developed, could meet the requirements of law for the measurement of such services. The concern of the court seems to be the avoidance of arbitrary assertions of value that represent subjective opinions of experts. A "standard" would imply that the same approach, using the same type of information, could be used in a variety of similar cases, reaching similar conclusions. By saying "some standard," the court is indicating that more than one standard might be acceptable, but that the procedure needed to be useful in more than one case. The suggestion in this paper is that the standards used for lost service valuation are the ordinary standards for economic valuation – the replacement cost and opportunity cost methods – both of which systematically rely upon information from the commercial marketplace to assess value of nonmarket services.

Both methods rely upon the notion that buyers and sellers reveal minimum purchase prices for what they purchase and minimum values for labor time they sell to the labor market as wage earners. One or the other of these methods is used in all types of valuation, even by experts other than economists. The true market value of a home is known only on the day that individual X pays individual Y a certain purchase price for that home, but real estate appraisers provide real estate appraisals estimating from sale values for comparable homes what that home is likely to be worth if it is sold. Such appraisals, by relying on comparables, are effectively estimates of the opportunity cost of the home. Likewise, in some circumstances, appraisers may try to estimate the cost of building a home of a certain type, which would be its replacement cost.³ In other fields other types of appraisal techniques and approaches all boil down to either opportunity cost approaches or replacement cost approaches. A conclusion drawn in this paper is that both opportunity cost and replacement cost approaches would fall within the "some standard" language of the *Vreeland* court for valuing losses under the pecuniary standard.

Vreeland appears to be the standard cited reference for the meaning of the pecuniary standard. The definition of pecuniary used in *Vreeland* is recognized in *Metcalf v. Atchison, Topeka and Santa Fe Railway Co.* (1974) and *Rachel v. Consolidated Rail Corp.* (1995), which cites *Metcalf*. *Vreeland* is also the decision cited by DeParcq and Wright (1956) as defining the meaning of lost services

under FELA. The paper by DeParco and Wright is frequently cited as defining the range of damages under FELA.

Examples of Treatment of Nonmarket Services in the State Law and Cases

In the discussion that follows, the language of the Missouri Wrongful Death Act and the discussion of cases from New Jersey and Michigan do not reflect an extensive study of state law, but do provide examples of the same apparent meaning of lost services as was found in the *Freeland* decision. Interestingly, the New Jersey and Michigan cases were opinions rejecting awards for *hedonic damages* of decedents,⁴ so these are not plaintiff oriented decisions, but rather more conservative defense oriented decisions.

In the Missouri Wrongful Death Act, which is apparently similar in language to many other state wrongful death acts, the standard for damage recovery is that:

The trier of the facts may give the party or parties entitled thereto such damages as the trier of the facts may deem fair and just for the death and loss thus occasioned, having regard to the pecuniary losses suffered by reason of the death, funeral expenses, and the reasonable value of services, consortium, companionship, comfort, instruction, guidance, counsel, training and support of which those on whose behalf suit may be brought have been deprived by reason of such death and without limiting such damages to those which would be sustained prior to the age of majority by the deceased or by the person suffering any such loss. In addition, the trier of facts may award such damages as the deceased may have suffered between the time of injury and the time of death and for the recovery of which the deceased might have maintained an action had death not ensued. The mitigating and aggravating circumstances attending the death may be considered by the trier of fact but damages for grief and bereavement by reason of the death shall not be recoverable.

In this statement, services are grouped, without differentiation, with "consortium, companionship, comfort, instruction, guidance, counsel, training and support." Thus, the Missouri act does not single out services to be defined narrowly as simple household production tasks which may be valued by an economist, whereas the other elements may not be valued by an economist as intangibles. While no definition of pecuniary is provided, that term normally implies "a market equivalent value" in some sense. And while the language of the act does not specify "loss of love and affection," the prohibition of damages for "grief and bereavement by reason of the death" seems to

imply a prohibition of damages for the intangible value of "loss of love and affection."⁵ In effect, Missouri allows recovery *only* for pecuniary losses in death cases.

In a recent New Jersey case, *Alexander v. Whitman* (1997), involving the death of a child, the U.S. District Court of Appeals for the 3rd Circuit, interprets New Jersey law (at *11) and cites *Green v. Bittner* (1980) as authority:

When parents sue for the wrongful death of a child, damages should not be limited to well-known elements of pecuniary loss such as the loss of the value of the child's anticipated help with household chores, or the loss of anticipated direct financial contributions by the child after he or she becomes a wage earner. . . . In addition the jury should be allowed, under appropriate circumstances, to award damages for the parents' loss of their child's companionship as they grow older, when it may be most needed and valuable, as well as the advice and guidance that often accompanies it. . . . However, damages for these additional items are confined to their pecuniary value, not including the value of emotional loss.

Here again, the emphasis is very clearly on the distinction between pecuniary value on the one hand and emotional loss, which would include the intangible elements of love, affection, grief and bereavement, on the other. The *Alexander* court is very clear in developing the distinction being advanced in this paper.

In a recent Michigan case, *Bretton v. United States* (1997), involving the death of an adult, the U.S. District Court for the Eastern District of Michigan, Southern Division, held that hedonic damages were not allowed, but citing *Wycko v. Knodke* (1962), said (at *3, fn 5):

In *Wycko*, the Michigan Supreme Court held that recovery of pecuniary damages under an earlier version of the Wrongful Death Act . . . was not limited to valuation by reference to material considerations, but must also include non-economic injuries such as the loss of companionship. . . . The loss of companionship, however, was not recoverable as an injury suffered by the decedent or by his survivors but as a means of placing a value upon the life of the deceased. . . . The court's holding, while expanding the items that could be considered in determining the pecuniary value of the decedent's life, specifically did not expand the damages available under the Act, indicating that the statute limited recovery to pecuniary damages.

It is worthy of note here that *Wycko* is a core case for the development of the *investment approach* for assessing parental loss resulting from the death of a child and has been widely cited in cases in other states. In *Wycko*, the Michigan Supreme Court held that

parental expenditures in raising a child, including the pecuniary value of nonmarket child rearing services provided by parents to a deceased child, were a proper basis for determining the pecuniary value of companionship with the child lost by parents as a result of the death of a child. This approach is reviewed favorably by Richard A. Posner in his *Economic Analysis of Law* (1992).⁶ This case strengthens the argument made in this paper that pecuniary aspects of companionship constitute a proper part of a lost services calculation when adequate foundation exists for determining the pecuniary aspects of companionship. Ireland and Ward (1995) develop the "investment approach for valuing parental loss in the death of a child" at length.

Treatment of Nonmarket Services in Forensic Economics

In terms of economic theory, the distinction between tangibles and intangibles or between pecuniary losses and other losses is straightforward. If a good or service is not unique to the relationship between two people (or one person in the case of a good), its value is tangible and pecuniary and can be measured by prices attached to reasonable market equivalents. If it is uniquely based on love and affection between the decedent and survivors, it is not amenable to accepted rules of measurement in economics. The love a man feels for his wife is unique and immeasurable. Her dishwashing activities are not. The *Yreland* court is drawing a distinction between services whose value depends uniquely on the love and affection that exists between a wife and husband and those services which could be supplied for a price by other individuals. The *Alexander* and *Brevton* courts are making the same distinction in nonFELA contexts. This is a simple prescription for a market test.

In terms of the underlying theory of utility in economics and in terms of laws governing tort recovery, the distinction between pecuniary and intangible elements is not limited to services but also applies to goods. Individuals may have very strong sentimental attachments to certain goods such that it is the specific good that generates those sentiments, which cannot be replaced by another quite similar item. Under ordinary rules of tort recovery, the right of recovery is only for the market replacement value of the good, not the additional emotional value the individual may place on the good. For example, suppose that a family's treasured photographs of family members no longer living is destroyed in a fire caused by tortious

negligence. Ordinarily, the sentimental value of these photographs would not be recoverable, but evidence that the family had been offered \$5,000 for the photographs because of their historical value by a broker in such photographs would make the \$5,000 a recoverable pecuniary loss even though the family might also have rejected a \$10,000 offer for sentimental reasons. Tangibility and the pecuniary standard seem to translate easily into "having reasonable market equivalents from which to infer appropriate market valuation."

Forensic economists have traditionally interpreted what are usually called lost household services much more narrowly than what is allowed under the *Yreland* and other decisions discussed in this paper. The mere use of the term, household services, implicitly narrows the scope of lost services to include only simple types of production tasks such as cooking, cleaning homes, doing the laundry, cutting the grass, repairing the automobile and so forth, rather than the more valuable services involved with child rearing, guidance, counsel, caring for elderly parents, giving career advice to adult children and so forth. Brookshire and Smith (1990) list as examples of household services: "lawn care, house cleaning, child care, . . . cooking, dishwashing, . . . chauffeuring . . . mowing of their lawn." Martin (1996) lists: "cutting the grass, washing cars, making household repairs, teaching children about sports activities, managing finances, moving furniture, shoveling snow, etc. (for the husband) . . . and . . . cooking, washing clothes, grooming children, providing guidance and counsel to children, washing windows, general housekeeping, serving as chauffeur, nursing illnesses, etc. (for the wife)" (parentheses supplied). A review of articles in the three journals devoted to articles on forensic economics finds 10 papers applying a narrow focus on household production and only one, by Wyrick (1993), that employs the broader definition of lost services implied by the *Yreland* decision. Wyrick's paper focuses on the economic value of parental guidance in terms of eventual career success of minor children.

The probable reasons for this narrow interpretation of lost services of decedents lie in the definitions of work and leisure employed in time use studies. Time use studies use time diaries prepared by survey subjects to assess how individuals within families use their time. Probably the most respected of these studies were the time use studies performed by the Survey Research Center of the University of Michigan, with summaries included in Juster and Stafford (1985). In Martha S. Hill's contribution,⁷ the time use classification table for married men who are full-time workers is first broken down into the broad categories of work (61.32 hours/week) and nonwork (82.64

hours/week). Work is then broken down into labor-market-related work, including market work (47.84 hours/week) and education (0.78 hours/week, and home-oriented work (12.70 hours/week) including house/yard work (7.22 hours/week), child care (1.69 hours/week) and services/shopping (3.79 hours per week). Nonwork includes personal care (75.05 hours per week, including sleep), organizations (2.46 hours/week), social entertainment (6.23 hours/week), active leisure (4.28 hours per week) and passive leisure (18.72 hours/week).

Using a narrow definition for household services would yield a time estimate of 12.70 hours per week for a decedent father and husband. Using a broader definition that includes time spent in ways that provided companionship, guidance, counsel and comfort to a husband's wife and children, create possible relevance for the categories of organizations, social entertainment, active leisure, and passive leisure. All of these time use categories might contain service hours within the broader definition of time used in a way that have value to the survivors of an adult parent decedent. In the Hill table, the division between work and nonwork is not a division based on the value of the activity to the decedent's survivors, but rather a pre-conceived distinction between activities that might be regarded as pleasurable versus activities that would be regarded as less pleasurable to the decedent himself. In a time use survey, the decedent himself would not have identified dinner with his wife as "work," but the activity itself might have had significant value to his wife and/or children that was quite separate from their feelings of love and affection for him.⁸ The relevant questions are not whether the decedent himself thought his activity was "work" or "nonwork," nor how much the decedent enjoyed those activities, but how much they were valued by his survivors, and whether that value is amenable to measurement by an economist, based on the availability of reasonable market equivalents for the services he had provided before his death.⁹ The *Vreeland* opinion does not list specific types of services that can be valued as lost, but indicates that losses must be specified in pecuniary terms. Thus, the appropriate test for whether a service can be valued by an economist is whether that service has reasonable market equivalents in the commercial marketplace. Clearly the narrow "household services" specifications in time use studies qualify as "services" in this sense. One can employ individuals to cook, clean house, babysit, do laundry, repair things around the home, run errands, chauffeur children, provide nursing care for elderly parents and so forth. But one can also employ individuals to act as

professional companions and to provide security services during entertainment away from the home, and provide assistance to elderly parents or adult children in separate homes. The question is whether these services by professional companions are reasonable equivalents for the pecuniary aspects of the services previously provided by the decedent.

Papers by Wyrick (1993), Olson (1996) and Rodgers (1996) show sensitivity to the issues involved with a broader definition of services. Wyrick focuses on the economic value of parental guidance and clearly sees that parental guidance contains very important elements not replaceable with low skill child care. Olson cited the language of the Wrongful Death Acts for both Missouri and Kansas and tried to estimate the value of lost emotional services using a replacement cost value based on the annual earnings of teachers, social workers, psychologists and counselors. The term "emotional" in this context is unfortunate in that it may imply a significance to the emotional relationship between the decedent and survivors. Clearly, an emotional relationship is not necessary for the services of companionship, guidance, counsel and comfort to have value to persons receiving these benefits. Nevertheless, Olson's paper directly addresses the issues of what is required by law and is an important precursor for the present paper. Rodgers provided critical assessment of Olson's paper, along with papers by Smith (1996), and Havrilesky (1996) that attempted to measure the combined service and love and affection values of lost relationships.¹⁰ While Rodgers questions the social value of making awards based on the value of lost relationships, he makes a number of useful suggestions for improving the measurement system employed by Olson.

Robert Michael (1996) questions the definitions used in time use analysis from the perspective of social welfare policy, raising the same questions raised here in a different context. Relying on his earlier study with Edward Lazear (1988), Michael also suggests, for a number of reasons unrelated to litigation, that the value of time is inadequately understood in the time use literature. Michael eloquently says about time generally (at 245-46):

Time is one of an individual's fundamental economic resources. Unlike money, time is distributed among us uniformly, which presumably means equitably. It cannot be stored up; it cannot be spent at an exceptionally speedy rate. There will be a fresh supply tomorrow and each day thereafter. Over the lifetime its allocation at one age has cumulative effects on its usefulness at a later age. Just how time is used helps define a people ethically, economically, socially, and in about every other way worth mentioning.

Lazear and Michael (1988) analyze allocation of income within families, and consider time use to be essential for an understanding of the meaning of income. They define full income as (at 21):

Fall income: monetized income plus the money value of the household member's nonmarket time. [This time is frequently evaluated at its labor market value, so that (ignoring for the moment the difference between money income and monetized income) full income as it would be if all household members devoted all possible time to earning wages.] [Parentheses in original.]

Implications for Measurements of Personal Consumption and Maintenance

The understanding of *lost services* presented in this paper has important implications for the correct interpretation of the personal consumption and maintenance deduction typically involved in wrongful death analysis. In 46 of the 50 states, the standard for recovery in death cases is losses of survivors of the decedent rather than losses of the decedent. Normal practice in most of these states is to deduct from any estimate of lost earnings of the decedent the amounts the decedent would have spent for his (or her) own consumption and/or maintenance. Maintenance is normally thought of as the narrower standard, implying those expenses the decedent would have had to spend to be able to earn the lost income. Personal consumption is the broader standard, implying all expenditures by the decedent that would not have benefited survivors. Depperschmidt (1991) provides a statement of alternative legal standards by which personal consumption or maintenance or both should be considered. In most states, the standards are not clearly specified other than that the losses being measured must be pecuniary losses to survivors and not to the decedent. This implies removing whatever expenditures the decedent might have made (other than taxes, which are treated separately and usually ignored as a matter of state law) from the stream of lost future earnings of the decedent. In several states, however, the reduction is limited to maintenance.

Even absent the issues raised in this paper, there is a great deal of uncertainty in forensic economic research about the correct way to measure and deduct for the personal consumption and/or maintenance in wrongful death actions. These differences stem from the tremendous variance that may exist between families in the division of

benefits received by families as a whole, from differences in legal definitions of what constitutes personal consumption among the various states, and from the absence of detailed information about the expenditures and uses of goods by specific family members. In effect, it is known that family members each consume some portion of the family's total real income, including both money income and nonmarket services produced by and for family members, but there is considerable controversy over what should be included in that portion and how that portion should be measured. See Thornton and Schwartz (1987), Patton and Nelson (1991), Dulaney (1991), Gilbert (1991), Lewis (1992), Fischer (1993), Trout and Foster (1993), Ciecka, Epstein and Ciecka (1995) and Gronau (1997) for alternative statements in this area.

The issues posed by a broader understanding of lost services add additional elements to the controversies over how to measure personal consumption. For example, if a decedent husband's services include providing companionship, guidance, counsel and comfort, and if those services are provided at restaurant dinners, the cost of the decedent husband's dinners may be a necessary cost of providing those services. The fact that such services may be pecuniary in nature is indicated by the fact that businesswomen in strange cities do sometimes employ male escorts of a purely nonsexual nature for the security aspects of such companionship. Having an escort both provides security in the sense of reducing the likelihood of a robbery and also makes it less likely that the woman will be approached by strange males seeking sexual favors.

When legal requirements do not restrict the definition of personal consumption, the conceptual problem in measuring losses to survivors is to remove from the decedent's earnings and nonmarket services those parts of the decedent's consumption that would not also have benefited survivors. But the decedent's consumption of an evening meal at the restaurant becomes part of the process through which the pecuniary aspects of companionship are provided, raising the question of whether the cost of the decedent's meal should not be treated as a cost of the decedent's provision of security services at the meal. Similar questions could be raised about the cost of opera tickets for a decedent husband who was known not to enjoy opera, but attended exclusively to provide companionship for his wife. An example well remembered by this author relates to attending a rock concert with a prepubescent daughter and having to listen to thousands of screaming girls at the end of each musical number.

There is a general consensus among forensic economists that

mortgage payments, payments for utility services in the home, and home repairs for survivors remain the same after the decedent's death. Thus, even though the decedent receives consumption benefit from those expenditures, the costs to survivors are not reduced by the absence of the decedent and no deduction should be made for these types of "family good" consumption expenditures. The decedent's loss of enjoyment does not affect the cost to survivors of providing for their own needs. In the case of the decedent husband's dinners in restaurants with his wife, the issue is almost identical. Enjoyment of the dinners by survivors depended upon companionship provided by the decedent and the cost of the decedent's meal was a necessary cost of his providing that companionship. At the same time, however, there is a very big qualitative difference between having a dinner with a beloved spouse and having dinner with a male companion who provides security and limited conversational opportunities. Making this distinction is a critical requirement of the *Tyreland* court and a necessary part of any effort by a forensic economist to value companionship under the pecuniary rule.

In this respect, companionship may be the hardest single category of lost services to interpret. The courts have regularly interpreted the instructional activities of parents toward minor children to be pecuniary in nature. Likewise, assistance by children of elderly parents in the form of care, comfort and guidance seem to be relatively straightforward examples of lost services. The *Tyreland* decision and the cases cited earlier seem to indicate that lost guidance and counsel of spouses and adult children also probably qualify in most instances. The court cases cited seem to recognize that there are two forms of companionship, one that is pecuniary and one that is based on the intangibles of love and affection. How those two forms should be distinguished and considered is a question for future research.

Agenda for Future Research

It has been argued in this paper that the legal standards for the types of lost services for which recovery may be sought under the pecuniary rule are not limited to those usually included in household production time-use studies. One useful research project would be a careful listing of the standards in each of the 50 states. In many venues, what services may be valued by an economist is determined by two criteria: The value of the service must be separable from the

intangible aspects that may derive from lost love and affection and the value must be assessed by some market standard. It is argued in this paper that many lost services that meet those criteria are frequently ignored in assessments of lost household production by forensic economists. It is also argued that many services that are casually classified as intangibles are actually quite pecuniary in that they do not depend for value upon the love and affection that existed between the decedent and survivors. It is further argued that services provided to adult children who may have been domiciled separately from the decedent may be recoverable.

Two major questions are suggested which will hopefully attract future research. The first relates to companionship, which is the most difficult category of lost services to assess. By its nature, the value of companionship is inherently affected by the intangible aspect of the relationship between the decedent and survivors in a way that guidance and counsel are not. Companionship in the form of enjoying a dinner in a restaurant with a beloved spouse or father or mother is different from companionship with a hired escort. Somehow, the pecuniary and intangible aspects of such services need to be separated since only the pecuniary aspects meet the requirements for expert assessment. The second major question is closely related. Since some aspects of personal consumption are directly tied to expenditures by the decedent that were made for the benefit of survivors, how are the self consumption aspects of such services as dinners with spouses in restaurants to be considered? However, regardless of how those questions are resolved, an area has been pointed to in which forensic economics needs to broaden its perspective if it is to conform with the requirements of law.

Endnotes

1. This definition is questioned even for purpose of time use analysis by Michael (1996).
2. *Michigan Central Railroad Company v. Freeland*, 227 U.S. 59 (1913)
3. By purchasing a given home or continuing to live in that home, a buyer is sacrificing the opportunity to purchase a similar home elsewhere. In the context being developed in this discussion, the replacement cost of a home is the cost of rebuilding that home, whereas the opportunity costs is the cost of the next best home for a similar price that the home owner did not purchase.
4. *Hedonic damages* is a term used to refer to estimates of *loss of the enjoyment of life* based on the *value of life* literature in economics. This approach has been used exclusively by plaintiffs. In reported decisions, courts have rather systematically excluded testimony by economists relying upon the value of life literature to develop estimates of lost pleasure. The author of this paper has published a number of papers opposing admissibility of hedonic damages but found the two cases discussed in this section in reviewing cases opposed to hedonic damage testimony. There is no similarity between uses of hedonic damage testimony to measure the intangible category of lost enjoyment of life and the broader conception of *lost services* being developed in this paper. See Ireland, Johnson and Taylor (1997).
5. The clause allowing damages from the time of injury and the time of death on behalf of the decedent appears to refer to hospitalizations and medical care during this period, whereas many other states do allow recovery for the "pain and suffering" of decedents under such circumstances.
6. At page 198.
7. "Patterns of Time Use," page 148.
8. Dining at a favorite restaurant without her husband might expose his wife to unwelcome advances from strangers as well as a greater risk of mugging when entering or leaving the restaurant. Dinner may also have been a time when the decedent's wife sought her husband's guidance and counsel with various projects of her own.
9. Forensic economists should always consider the important three questions

posed by Feldman and Egge (1995):

"Whose perspective are we taking?"

"What is the question the jury is to answer?"

"What is the purpose of the award?"

10. Smith and Havrilesky would not meet the requirements in the current paper because their estimating procedures do not distinguish between lost services and lost love and affection. The author would also have other problems with those estimating procedures that have been spelled out elsewhere (Ireland 1996).

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Critical Review: The New Cornell Report on the Value of Household Output

Estimating the monetary value of household output continues to be a major component of forensic economic analysis in wrongful injury, death or domestic relations litigation. It has been approximately 25 years since Kathleen Walker's (1973) seminal work was first published. The analysis, which was undertaken at Cornell University's College of Human Ecology, played a dominant role in valuations of household services in the 1970's and early 1980's. Recently, a new report, *The Dollar Value of Household Work* by Bryan, Zisk and Kim (Revised Edition) was issued by Cornell's College of Human Ecology. This report has an unusual publishing history. It was first issued in the mid 1990's. After less than a year, the report was revised, and a new edition was issued. This edition does not list a publishing date. It is the objective in this paper to review the research in the revised monograph. Since the report is divided into three components, the time employed on housework, the comparable wage rates, and estimates of the annual value of household output, the same format will be followed in this paper.

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Paul: Critical Review: The New Cornell Report on the Value
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