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SELF-ASSESSED VALUATION SYSTEMS FOR TORT AND OTHER LAW*

*Saul Levmore***

THE purpose of this essay is to demonstrate that self-assessment is a valuable, if underused,¹ tool for overcoming valuation problems in a wide variety of legal areas. Self-assessment builds on the notion that the individual who is most familiar with a property right is also likely to be the party best able to put a monetary value on that interest. Valuations by judges, tax assessors, appraisers, and juries generate substantial transacting costs, including court, administrative and insurance costs, inaccuracies, and risks of corrupt practices. Self-assessment systems seek to eliminate these disadvantages of our institutional assessment systems.

Theoretically, the applicability of self-assessment is almost endless.² However applied, it raises interesting and time-honored questions about valuation techniques, individual tastes, market prices, and strategic behavior. This essay, however, aims to provide a perspective that is quite practical; it will describe the strong and weak points of self-assessment in three specific areas: property tax assessment, tort damage determination, and corporate stock valuation. The contrast of these different subjects is intended to demonstrate the flexibility of self-assessment in solving the problem of accurate valuation that is common to many areas of law. Self-assessment is by no means a uniformly satisfactory solution to this common hurdle of accurate valuation. Rather, it is important to

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¹ Actually, self-assessment is used in a number of contexts, although it may not be recognized as such. For example, "claiming races," which are used to equalize competition in horse racing, can be interpreted as part of a sophisticated self-assessment system. See *infra* note 214.

² There are some areas of law in which parties appear able to self-assess—in that they can specify values in advance—but fail to do so. For example, only some contracts specify the damages that must be paid in the event of a breach. Arguably, such specifications would be more common if the parties were forced to bear the full cost of any litigation they engaged in, including, for example, the cost of judicial salaries.

explore the mechanics of self-assessment in order to identify the environments in which it is most workable and least objectionable. One specific claim of this article is that the principle of self-assessment ought to be utilized at least in the determination of tort damages. Such a system would save a tremendous amount of court time currently devoted to valuations that are speculative and often grossly inaccurate.

Part I of this article introduces some of the details of self-assessment by examining the concept of a self-assessed property tax. It is appropriate to begin with the property tax because it is in this area that the idea of self-assessment has already received some attention in the literature. This adventure over partially charted terrain sets the stage for an expanded discussion of the self-assessment concept in other areas. Part II discusses tort damages and proposes a system that offers, in some ways, the advantages of no-fault systems without seriously disturbing the ability of tort law to deter accidents in an optimal way. Finally, in discussing self-assessed securities valuation, Part III draws upon the similarities and differences between the systems described for the property tax and for tort damages and emphasizes the recurring themes and analyses in the various self-assessment schemes. It is difficult to determine which of the current institutional assessment systems ought to be replaced by self-assessment systems. It is possible to identify, however, the environmental characteristics that support self-assessment and to suggest the circumstances that favor the development of a self-assessment system.

I. OBJECTIVELY ASSESSED PROPERTY TAXES

A. *The Current System of Institutional Assessment*

Property taxes in the United States are generally legislated, collected, and expended locally.³ In purely arithmetic terms, the

³ Only three states—Hawaii, Maryland, and Montana—administer property taxes at the state level. In Utah, the State Tax Commission provides the personnel and the administrative vehicle for periodic reassessment. In the other states, the local tax assessor has the primary responsibility for valuing most property. In many states, however, public utilities are assessed at the state level and the tax revenues generated are prorated among local jurisdictions. Council of State Gov'ts, *The Property Tax: A Primer* 5 (1978).

Property taxation is so localized that there are more than 82,000 governmental units that levy such a tax. Competition among these units for desirable residents and businesses—mitigated to some extent by the need for revenues—has produced a bewildering

property tax is a rate,⁴ set by elected officials,⁵ that is multiplied by the assessed value of real property in a particular jurisdiction. This product represents a property owner's tax liability for a given time period; the sum of these liabilities is the revenue available to the government from this source.⁶ Frequently, there will be a number of different rates at any one time corresponding to various types of property, such as commercial and residential.⁷ Yet it can generally be assumed that a goal of each locale's tax system is to make the tax burden, within each class of property, a function of the property's value. To this end, government employees are given the task of assigning values to the improved properties in the locale and, periodically, updating the valuations on existing buildings and land.⁸

variety of assessment practices and tax rates. See R. Worsnop, *Property Tax Reform* 104 (1971). This competition and what would remain of it after the institution of a self-assessment system are topics well beyond the reach of this article.

⁴ This tax rate is often called a "levy." It is sometimes referred to in terms of mills-per-dollar. Each mill is one-tenth of a cent.

⁵ The tax rate is normally set by a town council or similar elected body. The tax assessor may also be elected or appointed. For a discussion of assessor expertise and its relationship to election or appointment, see Council of State Gov'ts, *supra* note 3, at 6.

It is clear that the relative burden of property taxation on similarly situated taxpayers within a single taxing jurisdiction is determined by the practices of the assessor and not the rate setter. However the rate is determined, there is some concern that when tax assessors themselves are elected, they are tempted to seek political favors by deliberately discriminating in their assessments. H. Aaron, *Who Pays the Property Tax? A New View* 68 (1975).

⁶ By fiscal 1976, the property tax provided roughly 31% of all revenues available to local governments, a 5% decrease from fiscal 1972. Apparently, the property tax as a revenue source has declined somewhat in proportion to other sources of revenue; however, state and local dollar collections increased by 35% over the five-year period of fiscal 1972-76. In fiscal 1976, property taxes accounted for fifty-seven billion dollars in revenues to state and local governments. Council of State Gov'ts, *supra* note 3, at 1-2.

⁷ Jurisdictions may consciously use different assessment procedures for different classes of property. Property tax rates for large commercial or industrial properties may actually be negotiated on a case-by-case basis, even when such uneven treatment is illegal. K. Case, *Property Taxation: The Need for Reform* 5 (1978).

⁸ Especially in an inflationary period, the relative burdens of taxation are distributed more fairly the more frequently assessments are updated. New structures are, of course, assessed as they are completed and old structures therefore must be reassessed lest each new property with its inflated value bear an unfair burden.

Still, there appears to be no set period of time after which assessors must update their properties. In California, for example, until recent times, most assessors followed what has been described as a "cyclical reappraisal policy," i.e., the assessor would concentrate his appraisal efforts in one part of the county one year and another part the next, covering the whole county in a period of three to six years, and then repeating the cycle. In the mid-1960's, however, the assessors were urged to concentrate their efforts in areas where analyses

The economic and social characteristics of this tax have been widely debated.⁹ One such issue concerns the desirability of assessing properties at one hundred percent of value rather than at some lower percentage.¹⁰ So long as total revenues from the tax can be adjusted by raising or lowering the tax rate, however, it is the relative assessment among taxpayers that is critical.¹¹

A less debated but far more crucial issue concerns the elusive nature of the property tax base and the meaning of "value." Even if it is agreed that value refers to market value,¹² it is not easy to agree on the nature or characteristics of market value, especially in the absence of an extremely active and dampened¹³ market for homogeneous goods.¹⁴ Nor are there lessons to be learned from the

of ratios of assessed values to sales prices of individual properties produced large coefficients of dispersion or average ratios that varied widely from the county-wide average. Welch, *Property Taxation: Policy Potentials and Probabilities*, in *The Property Tax and Its Administration* 209 (A. Lynn, Jr. ed. 1969).

A study of property assessments over a ten-year period in Boston concluded that, absent intervening sales, virtually no values had been updated; even when sales had occurred in the intervening period, reassessments were rare. A small sample was traced back over a 24-year period during which there had been no changes in assessments. K. Case, *supra* note 7, at 34-35. It has been suggested that city officials feel pressured not to reassess owner-occupied homes because such reassessments might be blamed for forcing home owners out of the city. Moreover, to the extent that assessors operate under a budget constraint, their first priorities are to assess new construction and then to reassess high-value, income-producing properties. D. Paul, *The Politics of the Property Tax* 27 (1975).

⁹ See, e.g., K. Case, *supra* note 7; D. Netzer, *Economics of the Property Tax* (1966); D. Paul, *supra* note 8; *Property Tax Reform* (G. Peterson ed. 1973).

¹⁰ For an argument that full assessment at 100% of value would provide useful information to a variety of users, see Aaron, *Some Observations on Property Tax Valuation and the Significance of Full Value Assessment*, in *The Property Tax and Its Administration*, *supra* note 8, at 157.

¹¹ See generally, R. Musgrave & P. Musgrave, *Public Finance in Theory and Practice* 477 (3d ed. 1980).

¹² For the most part, economists define the value of a good as its power in exchange, and this definition, otherwise known as the market value rule, has been utilized in most property tax statutes.

¹³ A dampened market is one without significant fluctuations.

¹⁴ If a property recently has been sold, an assessor can use the sale price to accomplish his task. If not, the assessor can use any of three traditional approaches: the comparable sales, cost, and income approaches. The comparable sales approach looks to recent sales of other properties and adjusts for features that differentiate the sold properties from the assessed property. The cost approach assesses the value of the underlying land, which within an area varies less per unit than do structures, adds the reproduction costs of the structures on the land, and subtracts depreciation. Finally, the income approach estimates the net rental income that can be earned by a property and capitalizes this amount to arrive at the current market value of the property. See International Ass'n of Assessing Officers, *Property Assess-*

relatively efficient administration of other taxes. The income tax, for example, deals with a flow variable; because the income received by one wage earner or landlord in a given year is generally denominated in the same units as that received by another wage earner or landlord, both incomes are directly comparable.

This ambiguity of market value, when used in a context other than one that refers to the subjective valuations that accompany actual trades, is the source of a very practical problem in the world of tax assessment.¹⁵ In considering whether to offer incentives to assessors who perform well or in ascertaining whether institutional assessment by a local tax assessor is a success, it is necessary first to identify a perfect assessment. If market value, or some fraction thereof, is the assessor's aim, this market value could be determined *ex post* in order to evaluate the assessor's performance. But even this is a hopeless task. Consider, for example, the assessor who knows that *A* is willing to buy *B*'s home for \$100,000. *A* has no reason to think that *B* is interested in selling and moving and *A* makes no offer. The assessor, figuring that there may well be someone who likes the house more than *A* does or that *A*, in the heat of negotiating, would finally offer \$105,000, dutifully assesses the house for property tax purposes at \$105,000 or an appropriate frac-

ment Valuation (1977).

These three approaches are strikingly similar to the valuation techniques for assessing corporate shares or business interests, and are subject to the same criticisms. The "Delaware block approach," for example, calls for the determination of market value, earnings value, and net asset value of stock, followed by the assignment of a percentage weight to each of these determinants. See generally W. Cary & M. Eisenberg, *Cases and Materials on Corporations* 117-36 (5th ed. 1980); Note, *Valuation of Dissenters' Stock Under Appraisal Statutes*, 79 Harv. L. Rev. 1453, 1456-71 (1966). Put simply, unless there is an active market for uniform goods, it is no small task to predict the price that would be reached in an exchange.

¹⁵ The ambiguities of the terms "market value" and "good assessment" are exacerbated by the fact that sellers and buyers are individuals and often do not behave alike. One person might not wait as long as another for the ideal offer. As Professor Groves has said:

[T]his does not mean, that if the assessor places a \$10,000 figure on a house and the house is sold next week for \$15,000, then the assessor has undervalued this house by one-third. Sales determine value but a particular sale is not conclusive and might be badly off target. Exchanges are made by fools like you and me; why should we assume that the exchangers are better judges of the market than the assessor? Of course, an estimate backed by cash is entitled to respect in terms of sincerity, but it is likely to be amateurish compared with the assessor's figure.

Groves, *Is the Property Tax Conceptually and Practically Administrable?*, in *The Property Tax and Its Administration*, *supra* note 8, at 16. See also F. Bird, *The General Property Tax: Findings of the 1957 Census of Governments* 26-37 (1960).

tion thereof. Sometime later, *B* decides to sell the property and offers it to *C* for \$95,000. *C* accepts. What is the market value of the house?¹⁶

So long as there are transacting costs in matching buyers and sellers and in showing houses, many owners will expect to sell their properties at some price less than that which some buyer would willingly pay. The point is that there is no objective market value for a property that is traded infrequently. It has been suggested that market value could well be defined as the price that some willing buyer would offer measured on an average of once every three months, or some other arbitrary interval of time.¹⁷ Even with this definition, however, it is impossible to evaluate an assessor's performance with regard to a specific property; to do so, one would need not only a fair sample of property sales but also a sophisticated study to weigh the sales that took place before and after the arbitrarily selected length of time.

An easier way to judge an assessor's performance begins by recognizing that it is not market value that is important. Rather, the *relative* assessments of taxpayers and how those assessments correspond to relative sales prices are important. In other words, an assessor who correctly assesses *D*'s home at three times the value of *E*'s has done a good job if that ratio proves true upon sale,¹⁸ even though the assessor may have been far off in predicting the absolute values of the properties.¹⁹ Once again, so long as the prop-

¹⁶ This example really reviews the earlier objection to the market value ideal. To measure an assessor's work against actual market transactions may be to use an inappropriate standard.

¹⁷ N. Tideman, *Three Approaches to Improving Urban Land Use* 55 (1969) (unpublished doctoral dissertation submitted to the Economics Department of the University of Chicago).

¹⁸ Again, the ideal of "market value" is accepted, despite its possible inferiority. See *supra* note 16.

¹⁹ Most jurisdictions assess value at something less than 100% of market value, the most common figure lying somewhere between 25% and 50%. This assessment ratio can be instrumental in avoiding complaints and corrections if the property owner is unaware of the assessment ratio in his jurisdiction. The owner may be quite pleased with an assessment that is, for example, 30% of his own assessment of the market value. He may think that the assessor has erred in his favor, whereas 25% may be the real assessment ratio. Council of State Gov'ts, *supra* note 3, at 4-5. Apparently, state tax administrators have been unable to hold local assessors to the use of any uniform percentage of full market value. The actual system is characterized by an extralegal system of classification that is developed by the individual assessor. Shannon, *The Property Tax: Reform or Relief?*, in *Property Tax Reform*, *supra* note 9, at 29.

erty tax rate can be varied, it is the relative burden on taxpayers that really matters. Studies of the horizontal equity of the property tax therefore have concentrated on inequalities in assessments relative to property values. The better the assessors perform their task within a jurisdiction, the less dispersion there will be in the ratios of assessment values to sales values.²⁰ The available studies indicate that for the simplest class of non-farm houses only a small percentage of the areas studied kept this dispersion within fifteen percent of the median assessment ratio.²¹ This is far more than the margin of error on income tax returns of comparable simplicity.²²

The difficulty of assessing value may not explain completely the observed inconsistency of property tax assessments. Recent studies call the property tax assessment system "certainly among the most corrupt of urban functions."²³ One commentator explained that "the actual work of valuing property is done by 'street level bureaucrats' over whom there is generally little effective supervision" and that assessing "is both discretionary and subjective, combining constant temptation with minimal likelihood of exposure."²⁴

²⁰ The "assessment-sales price ratio" refers to the quotient that results from dividing the sum of assessed values for sold properties by the sum of their sales prices. The properties that are actually sold are assumed to be a randomly generated subset of all assessed properties. Thus, if the ratio is three-tenths, assessors are, on average, assessing all properties in the jurisdiction at 30% of market value.

As a simple example, if in one locale ten homes are assessed at \$50,000 each and in the following year three of these are sold for \$100,000 each, then the median assessment ratio would be one-half and the dispersion zero. The relative assessments, in retrospect, appear to be perfect.

The "coefficient of dispersion" for a given area is the proportion that the average of the deviations of the assessment ratios of individually sold properties from their median ratio bears to their median ratio. This coefficient, which is usually expressed as a percentage, is considered to be an index of assessment inequality in that it measures the extent to which the relative tax burden is unrelated to relative property values. If the assessor does a flawless job and each property that is sold sells for its assessed value or a constant multiple thereof, the deviation will be zero and the coefficient of dispersion also zero. If the coefficient is 20%, each tax bill will be, on average, 20% more or less than it should be. See International Ass'n of Assessing Officers, *supra* note 14, at 287-88; D. Netzer, *supra* note 9, at 179.

²¹ In 1966, only 28% of the areas studied had dispersion ratios of 15% or less. The figures for 1971 and 1976 were 25% and 22% respectively. Only a very small percentage of areas (7.6 in 1966, 6.7 in 1971, and 6.9 in 1976) assessed well enough for the coefficient of dispersion to be less than 10 percent. Bureau of the Census, 1977 Census of Governments, Taxable Property Values and Assessment/Sales Price Ratios at 21, Table N.

²² D. Netzer, *supra* note 9, at 179.

²³ D. Paul, *supra* note 8, at 7.

²⁴ *Id.* at 8. Some critics argue that poor assessment performance may be the result of

B. A Simple Self-Assessment System

A self-assessed property tax system²⁵ can be thought of as one that seeks to improve the accuracy and lessen the expense of subjective, institutional assessments by avoiding the futile quest for an elusive market value and relying, instead, on the owner's internal value or reservation price.²⁶ In asking an owner to volunteer information about what his property is worth to him, we face an obvious problem that is at the core of any self-assessment system: unless constrained, an owner will underassess or, more accurately, selfishly announce a dishonest assessment. Only if this problem can be solved in a given setting is self-assessment suitable to that

conscious discrimination as opposed to incompetence. These critics point out that large cities have professional assessment departments with modern tools and yet still have not done an adequate job of valuation. D. Netzer, *supra* note 9, at 183. The problem of achieving acceptably accurate institutional assessments may be simply intractable, however, and those attaining low coefficients of dispersion merely "lucky" in having achieved the "correct" result.

²⁵ For other thoughts and descriptions in this area, see N. Tideman, *supra* note 17, at 52-69; Harberger, *Issues of Tax Reform for Latin America*, in *Fiscal Policy for Economic Growth in Latin America* 110 (1965); Holland & Vaughn, *An Evaluation of Self-Assessment Under a Property Tax*, in *The Property Tax and Its Administration*, *supra* note 8, at 79.

Apparently, self-assessment, in some form, has already been attempted in Wisconsin and Australia. Professor Groves notes that:

It comes as something of a shock to learn that the local assessor in the early days of Wisconsin was not an appraiser at all; he was a "collector of lists and administrator of oaths." Property owners were supposed to self-assess their property and take a solemn oath to the list. . . . In the late 1860's it was largely abandoned in favor of the assessor's own count and appraisal. Along with self-listing went drastic penalties for dishonest reporting. The experience should have established two principles of tax administration: unless reinforced by other evidence, self-reporting will not provide a fair and adequate tax base; threat of drastic penalty of and by itself will not help very much.

Groves, *Is the Property Tax Conceptually and Practically Administrable?*, in *The Property Tax and Its Administration*, *supra* note 8, at 23-24.

Australia's system called upon the state to purchase the property if it detected an under-assessing taxpayer, but this system failed because courts would not permit the state to "purchase" property below market value. See Woodruff, *Strengths and Weaknesses of the Property Tax*, in *Property Tax Reform, The Role of the Property Tax In the Nation's Revenue System* 120-21 (1972). The simple system of self-assessment that is described in the following pages of this article could also be attacked based on the constitutional requirement of "just compensation." Because the more sophisticated system of "competitive assessment" that is later developed in the text does not require any property owner to sell his property, however, the constitutionality of this simpler system with its "forced sales" is not discussed.

²⁶ These latter two terms refer to the amount of money a property owner would require to be indifferent between a sale and keeping his property.

environment.

In the context of property tax assessment, the tendency toward underassessment might be countered by a system of penalties or rewards similar to those that are used to encourage correct reporting in our income tax system. This strategy, however, would substantially increase administrative costs, an especially unattractive option for small governmental units. More important, unless those property owners who do not sell their property in the foreseeable future are to be virtually exempt from the penalties for underassessment, this system will call for audits of unsold properties that will require the same subjective, institutional assessments of market value that we seek to avoid.²⁷

Simple self-assessment instead relies on *market* penalties rather than institutional ones, and thus avoids entirely the need for fallible or corruptible government assessors and auditors. A simple self-assessment system might require each property owner to file a self-assessed valuation of his property. The institutionally determined tax rate is applied to this self-assessed amount to determine the yearly tax liability. Periodically—perhaps every other year in staggered fashion around a locale—the self-assessed amounts are publicized and any buyer who is willing to pay that amount to the owner/self-assessor is entitled to the property. An owner may always change his self-assessed amount up to the time of publication, but then the new amount represents the tax base for the next year. The system could also provide for property inspections, in order to remove any temptation to allow the exteriors of properties to deteriorate as a means of discouraging buyers.²⁸ The owner could collect a fixed fee for each inspection to compensate him for any inconvenience and to discourage hobbyists.²⁹ In short, the system uses forced sales, in lieu of audits and fines, as a way of encouraging accurate self-assessment.³⁰

²⁷ See *infra* text accompanying note 42.

²⁸ It is interesting to note that in some European cities the use of objectively measurable exterior features as part of institutional assessments encouraged homebuilders to respond with virtually windowless residences.

²⁹ Professor Tideman suggests that this fee will be a standard percentage of the assessed value. See N. Tideman, *supra* note 17, at 59.

³⁰ A system that allows any bidder to force a sale is far superior to one that allows only the government to be a forcing buyer. The government has insufficient resources to maintain a credible threat. Owners will know that they can underassess, especially when the government's budgetary woes are well known. Of course, a self-assessment system could re-

One objection to this system is that forced sellers ought to be compensated for their moving costs. A more sophisticated version of this objection would argue that the "forcing buyer" will not take the seller's moving costs into consideration and, therefore, there will be an inefficiently large number of ownership changes. Yet nothing stops sellers from taking into account the costs and disadvantages of moving when filing their self-assessments. Buyers, of course, face similar costs. On the other hand, some people dislike moving more than others and some, such as book collectors, have relatively high real moving costs. Thus, although it is true that self-assessors can account for these things, it may be objectionable for these differences among people to yield unequal tax burdens. This objection to the tax base itself, while small in magnitude in this illustration, will be discussed shortly in a more general application.³¹ For the present, it is sufficient to note that the self-assessor can protect himself by announcing a value that reflects the amount of money he would need to feel compensated for a forced move.³² Alternatively, the system could make this process more explicit—but no more or less effective in dealing with book collectors—by requiring the forcing buyer to offer a fixed percentage above the self-assessed amount.³³ Presumably, relative self-assessments will remain unchanged between these two alternatives, but the latter system will yield lower absolute self-assessments and higher tax rates.

A more pervasive objection to the self-assessed property tax is the heavier tax burden that falls on owners with idiosyncratic tastes. Most citizens, for example, might be willing to buy a particular home for \$50,000. The owner, *F*, however, may have planted trees and installed bookshelves that he adores. He would require \$100,000 to be pleased with a sale. If there is even one buyer who shares some or all of *F*'s tastes, then *F* will have to self-assess at

quire ordinary bidders or forcing buyers to post bonds that would guarantee their ability to buy the property in question.

³¹ See *infra* notes 35-38 and accompanying text.

³² The possibility of "assessment insurance" is also relevant. In the event that a "forcing buyer" acquired the property—despite an assessment suggested or agreed upon by the insurer—the insurer would pay an agreed-upon sum to the insured or be required to purchase the property from the successful bidder and return it to the insured, the original owner.

³³ One commentator suggested that this premium be fixed at 20%. Harberger, *supra* note 25, at 119.

\$100,000 to forestall a forced sale. This is so despite the fact that "most people" would consider \$50,000 to be the reasonable value of *F*'s home. On the other hand, in an idealized sense, \$100,000 may be closer to market value in that the market, like fearful self-assessors, deals in marginal and not average transactions.³⁴

Although the next section of this article describes an assessment system that gives some relief to the idiosyncratic owner while retaining the advantages of self-assessment, it is important to realize that the heavier burden on idiosyncratic taxpayers is not necessarily wrong or inefficient. In the first place, most of these idiosyncracies imply greater happiness or utility on the part of the owner. If, for example, there is only one cul-de-sac in an area and an owner, whose home is on the cul-de-sac, greatly appreciates the absence of through traffic, he may well fear a forced sale and "over-assess" his property. Yet, this owner's assessment reflects his good fortune in living on a cul-de-sac; good fortune, insofar as it can be determined, is arguably the ideal tax base in any system that seeks to take more from those who have more.³⁵ In practice, most idio-

³⁴ For a brief discussion of the distinction between marginal and inframarginal or average purchasers, and the relationship of these concepts to consumer surplus, see *infra* note 195. Consumer and producer surpluses are considered at *infra* note 35.

³⁵ The question of whether to include idiosyncratic tastes in the tax base is related to the concepts of "consumer surplus" and "producer surplus," and whether these surpluses ought to be taxed when measurable. Imagine a society in which ten workers would do a task for five dollars per hour, and another ten workers would do this task for six dollars per hour (perhaps they value their leisure time more), and a final group of ten workers that could be hired at a wage of seven dollars per hour. The employer calculates his profit levels for the various combinations and decides to hire seventeen workers at six dollars per hour. The employer knows that he must pay all the workers the same wage, because he has no way to differentiate among them. In addition, morale would suffer if two wages were paid for the same task. Could not the tax system legitimately tax the first group of ten workers more than it does the next seven? Given that they would have worked for five dollars per hour, they are, after all, "happier" than some of their fellow workers who are receiving not a penny more than their "reservation wages." This one dollar difference between the market wage and the wage at which they would have first agreed to work is their "producer surplus."

Similarly, suppose that *A* and *B* both buy stock in the same corporation for \$10 per share and later sell their shares for \$40 apiece. Each will be taxed on a \$30 gain. Yet what if we knew that *A* would have bought the stock for \$50 per share, given his expectations at the time of purchase? This would give him a \$40 "consumer surplus" per share on the shares he actually purchased at \$10. Our tax system rarely tries to tax these surpluses or idiosyncracies and, instead, treats all taxpayers as if they were marginal buyers and sellers. The tax system must function in this fashion because we can judge neither the amount of such surpluses nor the magnitude of idiosyncratic tastes. This is not to say, however, that it would be wrong or inefficient to tax these surpluses.

syncratic owners will live a little dangerously and self-assess at an amount that is greater than their perceptions of non-idiosyncratic valuations but less than their true internal valuations. At least two factors will determine the willingness of idiosyncratic owners to live dangerously. First, as tax rates increase, self-assessment will decline relative to internal valuation. Second, as the perceived probability grows that someone shares the owner's tastes in full or in part and will expend the effort to investigate the property, including its announced assessment, self-assessment will increase relative to internal valuation.³⁶ Thus, while the owner with unique tastes is taxed more heavily in this self-assessed system than under institutional assessment, it is likely that he is still not taxed completely on his "happiness," or real internal valuation.

Because of the demonstrated relationship between self-assessed amounts and the perceived likelihood of a forcing buyer, it follows that self-assessment can be affected by threats and strategic behavior.³⁷ It is not quite true, for example, that when self-assessing, the idiosyncratic owner will only consider the probability of a forcing buyer with moderately idiosyncratic tastes. He must also consider the chance that someone will come along and threaten to buy the property at a price greater than the non-idiosyncratic valuation level and yet less than the true internal value to the idiosyncratic owner. This threat may be sufficiently credible to elicit a side payment from the owner. That is, the owner may prefer occasional side payments to higher property taxes.³⁸

To the extent that these threats encourage self-assessors to announce a value closer to the true internal value of the property, the potential threat can be said to accomplish a societal good—so long as we favor including idiosyncratic happiness in the property tax base. Otherwise, such strategic behavior may transfer wealth from

The self-assessment system discussed in the text is a rare example of a system that is able to go a long way toward measuring and taxing the internal valuations of a taxpayer that exceed the market value. It is much more sophisticated than our income tax system and, therefore, vulnerable to different objections. Much of the textual discussion from this point on is aimed at preserving the advantages of self-assessment without requiring the taxation of idiosyncratic tastes.

³⁶ For a formalized elaboration of this self-assessment strategy, see N. Tideman, *supra* note 17, at 61-67.

³⁷ The latter term refers to activity that will benefit an actor by way of affecting the behavior of a competitor.

³⁸ Essentially, the briber and owner collude at the expense of the government's coffers.

the risk-averse owner with either unique tastes or special knowledge to the skilled extortionist. Efforts expended in the quest for such side payments would be socially unproductive. Although the opportunities for strategic behavior deserve attention, similar opportunities in other areas, such as the income tax, appear to be rarely exploited.³⁹

One minor drawback to self-assessment is that changes in the general price level will require self-assessors to reassess their properties continually in order to stay one step ahead of the forcing buyer. The system could and should automatically link the publicized taxable assessments to the price index to protect ignorant or absentee owners and reduce costs to other owners. But inflation⁴⁰ does not always affect internal valuations in predictable ways or ratios. Because each self-assessor can be expected to respond to inflation in a personal way, there is no escape for owners from the reality of costly compelled reassessments in an inflationary world.

Conventional institutional assessments may actually avoid these costs, with no sacrifice in accuracy, so long as the assessor accounts for inflation when bringing new properties or improvements into the government's portfolio of taxable property. The good assessor will deal with new properties by lowering the fraction of the total value that is included in the assessed value, thereby equalizing the relative assessed values of old and new property. Once the relative burden among properties is correctly assessed, an increase in the price level works no harm. As the government needs more revenue it can always raise the tax rate as the assessed value becomes a smaller fraction of market value.

C. Competitive Assessment

Although the previous section describes a self-assessment system that provides incentives for accurate valuation and that eliminates the problems associated with institutional assessment, it is fair to predict that the notion of the forced sale will disturb many readers

³⁹ There is, for example, no evidence that informers play an important role in the administration of the income tax or that side payments are extracted by informers from their targets.

⁴⁰ The textual analysis that follows is similar—but converse—for deflationary price changes.

and taxpayers.⁴¹ It is true, for example, that if *H* and *J* are enemies, *H* can force *J* to move by offering *J*'s self-assessed amount. Of course, *J* can profit from *H*'s desire to hurt him by overassessing, but some readers will probably object to the notion that enough money can ease any pain. In general, self-assessment will not win many admirers if, when adopted, it generates a large number of forced sales and relocations, along with neighborhood hostility and instability.

Competitive assessment meets this objection to the simple self-assessment system by borrowing a tool from the penalties and rewards alternative rejected earlier.⁴² A simple competitive assessment system would require that properties be opened for assessment periodically. Any number of self-appointed assessors, including corporations, may submit their assessments of a given property's value to the central authority. At a stated time, these assessments, or bids, are opened. The owner of the property is then faced with two options regarding the highest of these assessments. First, as with simple assessment, the owner can sell his property to the highest assessor. By submitting a bid, each assessor runs the risk of becoming, in essence, a forced buyer. Alternatively, the owner can retain his property and then accept the highest assessment as the taxable value of his property. The highest assessor will then receive, as a commission from the local government, a percentage share of the increased tax revenues that will now be derived from this property.⁴³ These commissions will attract a group

⁴¹ Indeed, it appears that the commentators most critical of self-assessment rely, in large part, on the guess that society will not accept the forced sale component of self-assessment, will ostracize forcing buyers, and thereby eliminate the much needed credible threat against underassessors. Holland & Vaughn, *An Evaluation of Self-Assessment Under a Property Tax*, in *The Property Tax and Its Administration*, supra note 8, at 84-87.

⁴² See supra text accompanying note 27.

⁴³ The competitive assessment mechanism could be combined with the simpler self-assessment system, but this would encourage owners to underassess their property and wait for a "bounty hunter" to come along and reassess it. If simple self-assessment is to be useful, there also must be a fine levied on a self-assessor who chooses to retain his property and pay higher taxes when confronted with a competitive assessor. The existing literature assumes that self-assessment will be the core of the system and that such fines will be necessary. Holland & Vaughn, *An Evaluation of Self-Assessment Under a Property Tax*, in *The Property Tax and Its Administration*, supra note 8, at 94.

But self-assessment need not be the first step in the system. Competitive assessment ought to be quite successful if the government pays a commission, or finder's fee, to any competitive assessor who succeeds in increasing tax revenues. Instead of hiring assessors,

of professional assessors.

With a small modification, competitive assessment can be made responsive to the criticism discussed in the previous section that idiosyncratic owners should not bear a heavier tax burden. The competitive assessment system just described already offers some relief to the idiosyncratic owner. In the simple self-assessed system, after all, the owner with unique tastes must come to monetary terms with his own tastes or risk the prospect of a forced sale. At least competitive assessment allows the owner to avoid moving. So long as he is willing to pay higher taxes for those idiosyncracies that are shared by a competitive assessor, he retains ownership of his property. Moreover, the competing assessors may never assess at a level that includes idiosyncratic tastes, thus permitting the owner to sit back and pay the lower property taxes.

Competitive assessment, by encouraging multiple assessments with a reward feature, is able to do a still better job of coddling the idiosyncratic owner by borrowing from the concept of a second-price auction.⁴⁴ Put somewhat simplistically, competitive assessments can be modified so as not to penalize the owner's tastes if they are so idiosyncratic that only *one or two* other parties share them.

To illustrate the objection to the idiosyncratic penalty and the modification that responds to it, assume that *K* adores his garden and view and would require \$100,000 to be satisfied with the prospect of moving. Most citizens would pay \$50,000 for *K*'s property. The property has previously been assessed at \$50,000 and *K* has been paying taxes on this amount. *L* is a professional assessor who would like to earn a commission from the local government under

the government will essentially purchase assessments in the marketplace. If studies reveal an unacceptable coefficient of dispersion, then the government will know to increase its commission schedule. This system is still in the self-assessment family in the sense that if a competitive assessor "bids" for the property at some price greater than the current valuation amount, the property owner must consider this internal valuation and decide whether to force a purchase or begin to pay taxes based on the new, higher assessment.

An advantage of competitive assessment is that property owners need not expend any effort on self-assessment until such time as a competitive assessor materializes with a bid that exceeds the prevailing assessment. On the other hand, simple self-assessment requires constant revaluation. Put somewhat differently, competitive assessment places the lion's share of the valuation work in the hands of volunteers or professionals who, like other entrepreneurs, can be expected to be more efficient at their chosen work.

⁴⁴ See Vickrey, Counterspeculation, Auctions, and Competitive Sealed Tenders, 16 J. Fin. 8, 14, 20-23 (1961).

the competitive assessment system, but he is afraid to assess the property at much more than \$50,000. *L* realizes that *K* probably values the property at more than \$50,000, but *L* does not know how much more. *L* fears, therefore, that *K* will force him to purchase the property at *L*'s aggressively assessed amount, in which case *L* may have to suffer a loss on resale. *L* himself has no use for gardens and trees. To the extent that similar assessors can be expected to avoid this risk of loss and assess the property at \$50,000, *K*'s burden is made no heavier despite his unique tastes and genuine happiness.

On the other hand, we might expect some assessor, *M*, to take a chance on *K*'s tastes and assess the property at, let us say, \$60,000. *M* is hoping that *K*'s unique tastes, or consumer surplus,⁴⁵ coupled with his fragile nervous system, will lead *K* to accept the burden of higher property taxes, thereby generating a sizable commission for *M*.⁴⁶ Let us assume *M* is correct and *K* is rather pleased that *M* did not test him with an assessment of \$99,000.

Now, imagine *N*, who shares *K*'s taste for gardens and views. If *N*'s tastes are stronger than *K*'s and *N* is not wealth-constrained, the property will pass to *N* under any system—often as a result of a straight old-fashioned sale from *K* to *N*. *K* will profit by virtue of being in the right place for the purpose of satisfying *N*'s tastes. If *N* shares *K*'s tastes, however, *N* will want to pay \$100,000 (or less) for a property that *K* values internally at \$100,000, but most citizens value at \$50,000. If *N* bids \$100,000 in a competitive assessment of *K*'s property, *K* must sell or pay tax on that amount. Those who object to placing heavier tax burdens on idiosyncratic individuals will condemn self-assessment and competitive assessment for forcing *K* either to sell his property to someone who likes it no better than he or to pay a higher property tax on the idiosyncratic garden and view that only he and *N* appreciate.

These critics can be placated by modifying the system to require that the tax be paid on the *second-highest assessment*, while still

⁴⁵ For a discussion of consumer surplus, see *supra* note 35.

⁴⁶ *M* cannot expect to exploit every bit of *K*'s extreme tastes. At some point *K* will allow (force) *M* to buy the property and then *K* will offer to buy it back at a lower price. After all, *M* must hope that someone else will share *K*'s tastes and relieve *M* of the property. Thus, *K*'s "fragile nervous system" is relevant in that *K* is really judging the likelihood that another buyer will materialize at an idiosyncratically high price to bid for *M*'s newly purchased home.

permitting the owner to force a sale at the highest bid level. In the above example, then, *K* can either sell to *N* at \$100,000, if that is *N*'s assessment, or pay tax on *M*'s announced \$60,000 amount. *N* will receive a commission on the increase in revenue that flows to the government from the tax base of \$60,000 as compared with the old \$50,000 assessment. Alternatively, if the government senses that there are not enough competitors undertaking assessments, it could divide the reward and give a small piece of it to *M*, the second-highest assessor. In any event, it is important to retain *K*'s option to sell to the highest assessor at that assessed amount, or there will be little to stop the overzealous commission hunter. This system, which can be called modified competitive assessment, seeks to ensure that *K* will not be penalized too heavily for his somewhat unique tastes. Despite *N*'s high bid, *K* continues to be taxed according to *M*'s assessment.

Unfortunately, modified competitive assessment may disintegrate if *N* acts to maximize his reward. *N* can get a friend, *P*, to bid \$1 less than *N*'s assessment so that if *K* does not wish to sell to *N*, *K* will owe taxes on *P*'s second highest assessment. *N* and *P* will then share in a hefty reward that fully penalizes *K*'s idiosyncracies. If *P* is a genuine assessor, and no friend of *N*'s, then although "most citizens" value *K*'s property at \$50,000, *K*'s high tax burden appears less unfair because there are now *three* parties who value the land highly, and \$100,000 is beginning to look much more like a proper value. But if *P* is *N*'s accomplice, *N* will have succeeded in undoing the modification of competitive assessment.

One possible method of restoring integrity to this modification is to charge a fixed fee for each assessment that is submitted. On the margin, then, each assessor will be deterred from trying to be both highest and second-highest. This deterrence occurs because, although the amount of the commission may exceed the entry fee, the fixed entry fee might make the expected return to the highest assessor greater than that for highest and second-highest combined. This solution is a difficult one to construct, however, and it is probably better to include idiosyncratic happiness in the tax base rather than to attempt to design the assessment system around this "problem." Alternatively, the problem is easily solved if a sufficient number of assessors will materialize in the absence of any commission from the government. It may well be that competitive assessment should be structured without any rewards and

that the prospect of buying the property alone will stimulate assessors. Owners would still sell at the highest price or pay tax on the second-highest assessment. There would be no danger of the collusion described above because there is no reward at stake.

More generally, the two solutions just described can be combined in a way that virtually exempts idiosyncratic tastes from taxation. As the commission—or percentage share of the increased tax revenue—declines, the incentive for an assessor to submit a second assessment in an attempt to drive up the second-highest bid is reduced. Coupled with a small fixed fee for each valuation, lower commissions reduce the expected profit from collusive assessments. If the owner's tax is based on the second-highest assessment, idiosyncratic tastes may escape taxation. If the government seeks a more active market in assessment, then it can raise the commission level and seek to protect idiosyncratic tastes by raising the fixed fee (for each assessment) as well. Of course, if the property is sold by the owner, then the assessor/buyer will begin to pay taxes based on the actual sale price, that is, the amount of his own assessment.⁴⁷

D. Other Features of Self-Assessed Property Taxes

These self-assessed systems—and competitive assessment is really self-assessment in the sense that the property owner always decides whether to sell or pay more tax—are primarily intended to eliminate the disadvantages of the current institutional assessment system. But because they use forced sales to assure honest valuation, these systems engender important side effects. Consider, for example, the familiar problem of assembling a large number of plots for a large-scale project, such as urban renovation or amusement park construction. Within the existing legal framework, to assemble the required property the buyer must use clever intermediaries and some dissembling tactics or bargain with “holdout” sellers who will seek to capture a share of the project's profits.⁴⁸ In fact, before the project is begun, the investor may be

⁴⁷ Note that the complexities of second-price auctions and modified competitive assessments are relevant only to the extent that it is considered undesirable to include idiosyncratic tastes in the tax base.

⁴⁸ For a discussion of the holdout problem in a different context, see *infra* note 190 and accompanying text. See also Levmore, *Securities and Secrets: Insider Trading and the Law*

discouraged from undertaking the project at all if the probability of a holdout is substantial. Here, simple self-assessment eliminates the buyer's (and society's) problem. The potential investor can read the publicized self-assessment lists and figure the precise cost of purchasing the various properties. The investor can then buy the properties as planned.⁴⁹

A similar result will be reached in a competitively assessed system. Although the buyer cannot force sales but can only force a choice between selling and paying higher taxes, the holdout's hand is much weakened and the investor's incentives are stronger. After all, a seller who holds out will be forced to pay higher property taxes until the next assessment day, which may be a year or two away. The threat of such a tax burden will surely discourage owners from holding out when dealing with a buyer who may be comparing a number of sites and be perfectly able to go elsewhere. More interestingly, the investors are rewarded for innovation even if there are holdouts.⁵⁰ The investor will share in the increased tax revenues and, therefore, will be less discouraged at the outset by the prospect of holdouts. These two observations combine to illustrate a third effect of competitive assessment on the holdout problem: a potential holdout seller will know that the buyer is now somewhat less likely to meet the seller's inflated price and more likely to be satisfied with a commission on the holdout's higher future taxes. Sellers therefore will be less likely to hold out than they are under institutional assessment.

It is a small step from forced sales and holdouts to eminent domain. A simple self-assessment system largely relieves courts from the difficult task of determining "just compensation." The condemnor simply pays the self-assessed amount and is entitled to the property. Such a system eliminates the bias that exists against small condemnees, who are loathe to expend litigation costs when little is at stake and therefore are more likely to accept the government's offer for their property. To be sure, if the taking is easy to predict, then property owners may inflate their self-assessments and wait for the government's project to come along. In such cases, the courts may resort to traditional valuation, although the ap-

of Contracts, 68 Va. L. Rev. 117, 141-42 (1982).

⁴⁹ This advantage of self-assessment was suggested in N. Tideman, *supra* note 17, at 60.

⁵⁰ If there are no holdouts, the investor's rewards lie in the project's profits.

praisal job may be somewhat easier when earlier self-assessments by the condemnee and his neighbors are put into evidence. Similarly, competitive assessments (modified or not) may be evidence useful to a court in determining the value of condemned property; but because under the terms of competitive assessment owners cannot be forced to sell, the need for institutional assessment remains.

The power to force a sale has some unexpected effects. A buyer who seeks to racially integrate a neighborhood will succeed more easily. Sellers who are fiercely opposed to such integration will pay dearly in the form of higher taxes. At first, it may appear equally likely for a group to combine and force an owner out of an area by requiring him to pay astronomical taxes unless he moves. Upon closer inspection, however, one realizes that any persecuted owner can take the windfall purchase price he receives and reinvest it in his assessment of, or bid for, another property in the same area. Because it is much easier to concentrate on buying a small number of properties than it is to "defend" a large number, integration will be easier to accomplish than segregation.

It is perhaps unfortunate that these side effects to self-assessment exist. Although these consequences seem to be positive, they are controversial and distract attention from the advantages of self-assessment as a simple valuation system.⁵¹ In Part II, the advantages of self assessment and disadvantages of institutional assessment are further examined in the context of determining tort damages.

II. SELF-ASSESSED TORT DAMAGES

A. *The Limits and Potential of Self-Determined Damages*

The criticisms of the current system of determining tort damages are so familiar that little new material need be developed.⁵²

⁵¹ One other difficulty that would be generated by self-assessment concerns the treatment of encumbrances on property. If an underassessor leases his land for a 20-year period, the threat posed by a forcing buyer will not be substantial. This problem can be solved in much the same way as the system deals with adjacent plots of land: each substantial interest in the property will be recorded, separately assessed, and taxed. See Holland & Vaughn, *An Evaluation of Self-Assessment Under a Property Tax*, in *The Property Tax and Its Administration*, supra note 8, at 111-12.

⁵² The most persistent and vocal criticism has come from advocates of no-fault insurance. An early and widely quoted example is the "Columbia Plan." The committee that drafted

Although few citizens realize the extent of dispersion about the mean assessment ratio for property taxes, for example, any newspaper or magazine reader is acquainted with the widely varying damages awarded to victims of accidental injuries and with the enormous costs of administering the tort system.⁵³ Tort law provides a damage remedy to the victims of a wide variety of injuries—including losses from medical expenses, property damage, and damage to reputation—but perhaps the most intractable issues arise in the determination of lost earning capacity.⁵⁴ This section focuses on developing a self-assessment system that eliminates or minimizes the need for courts and juries to measure lost earning capacity after the loss has been sustained. A later section considers

this plan states:

This [fault] system of litigation has certain marked defects: (1) the imposition on the plaintiff and on the defendant of the burden of producing evidence as to fault, although the accident itself has often hindered or prevented them from obtaining witnesses; (2) the difficulty of ascertaining the facts sought, even where the best evidence is obtainable, because witnesses who are neither trained nor prepared to observe cannot, after the lapse of months or even years, enable a jury, which has no training in fact finding, to fix the blame for an accident caused by events which succeeded each other in the space of a few seconds; (3) *the impossibility of fixing damage accurately, since there are no recognized criteria of the value of pain or of life or of disability*; (4) the delay, especially in the large cities, caused by waiting for trial, and aggravated in some cases by appeal; (5) the heavy cost of attorneys' fees which generally range from 25% to 50% of the amount recovered; (6) the financial irresponsibility of many motorists who cause accidents; (7) the burden cast upon the courts and the consequent congestion of all judicial business in large cities, due to the volume of motor vehicle accident litigation.

Columbia Univ. Council for Research in the Social Sciences, Report by the Comm. to Study Compensation for Automobile Accidents 200-01 (1932) (emphasis added).

Professors Keeton and O'Connell criticize the tort system because it: (1) critically overcompensates and undercompensates many injured persons; (2) is cumbersome and slow; (3) often is unfair; (4) costs too much to operate; and (5) creates too many opportunities for dishonesty. R. Keeton & J. O'Connell, *Basic Protection for the Traffic Victim* 1-3 (1965).

Although much of the criticism of the tort system concentrates on auto accidents, there is no conceptual reason so to limit the attack on the existing tort system. See W. Rokes, *No-Fault Insurance* 329-68 (1971) (citing 558 sources that criticize the current tort system, propose a no-fault system, support the present fault principles, or offer some combination of these positions).

⁵³ See, e.g., *Why Everybody is Suing*, U.S. News & World Rep., Dec. 4, 1978, at 50-51. See also Note, *Advertising the Economics of High Jury Awards: The Insurance Industry's Bid for Prospective Jurors to Tighten Their Purse Strings*, 37 Wash. & Lee L. Rev. 1175 (1980) (outlining the insurance industry's public plea to prospective jurors to keep personal injury awards low and noting the bar's subsequent allegations of jury tampering).

⁵⁴ See O'Connell, *Transferring Injured Victims' Tort Rights to No-Fault Insurers: New "Sole Remedy" Approaches to Cure Liability Insurance Ills*, 1977 U. Ill. L.F. 749, 759.

the usefulness of the self-assessment principle for other types of tort damages.

Just as the discussion in Part I did not consider the wisdom or incidence of a property tax, the concern here is with a system for self-assessing tort damages and not with the underlying questions of the assignment and extent of tort liability. Self-assessment accepts the prevailing notions of when and on whom the burden of tort liability ought to be imposed. In fact, the self-assessment system that will be proposed takes the compensation, admonition,⁵⁵ and deterrence goals of tort law quite seriously.⁵⁶ It is a system that seeks to compensate injured parties more accurately and efficiently than the current legal regime—but it is also a system that attempts to deter accidents as efficiently as possible.⁵⁷

Specifically, the following discussion deals with what can be called the “second half” of the tort trial. Self-assessment makes its court appearance after the tortfeasor has already been found liable to the injured party or his family in the first half, or liability portion, of the trial. The question is then one solely of damage determination, and more particularly, of the extent of the victim’s lost future earning capacity.⁵⁸ In sum, a self-assessed tort system attempts to save the costs of damage determination that are associated with the second half of the conventional tort trial.⁵⁹

⁵⁵ See G. White, *Tort Law in America* 237-38 (1980) (expressing approval of the ability of tort law to sanction or censure undesirable noncriminal conduct). The admonitory characteristics and goals of various tort systems are not discussed in this article. The reader should note, however, that self-assessment preserves the admonitory function of tort law by leaving the first half, or liability portion, of the tort trial intact.

⁵⁶ Calabresi suggests that the principal goals of any accident law are fairness and reduction of costs. As to the latter, he suggests three “subgoals”: (1) reducing the number and severity of accidents, (2) reducing the societal costs resulting from accidents, and (3) reducing the costs of administering the treatment of accidents. See G. Calabresi, *The Costs of Accidents* 26-31 (1970).

⁵⁷ See generally R. Posner, *Economic Analysis of Law* §§ 6.2-6.17 (2d ed. 1977).

⁵⁸ Analytically, it is convenient to conceive of the trial as taking place in two steps or halves. Often, of course, the trial will actually be bifurcated into separate liability and damage determinations. Trial judges may order such bifurcation to prevent evidence of the plaintiff’s damages from prejudicing the jury on the liability issue.

⁵⁹ Estimates of the costs associated with damage determination seem to be unavailable, but the overall drain on resources by tort trials is quite incredible. See, e.g., Administrative Office of the U.S. Courts, 1980 Ann. Rep. of the Director (reporting similar information for the federal court system); 1975 U.S. Dep’t of Justice Nat’l Center for State Courts, *State Court Caseload Statistics* Ann. Rep. 51 (recording the volume of cases and tort cases).

Motor vehicle accident litigation alone has consumed tremendous resources. See Depart-

Self-assessment in torts will yield a system in which the amount of damages awarded is more predictable than it is at present. Most victims can be expected to prefer predictable compensation in the event of an accident. After all, a family may want to take steps to protect itself against the lost earnings of one of its members. It is easier to do this accurately if potential damage awards are predictable.⁶⁰ Nevertheless, both because risk preferences and planning needs are themselves difficult to predict and quantify, and because the discussion later in this essay emphasizes the planning potential within a self-assessed system, the discussion now proceeds as if the single criticism of the current tort system were its tremendous administrative costs.

Although these administrative costs result from court appearances, settlement attempts, procedural requirements, and many other components, it is clear that each of these components grows larger as the number of litigable issues increases. Thus, even if the question of liability remains, if the determination of lost earning capacity can be removed from the set of litigable issues, trials will be simpler, settlement negotiations less complex, and bureaucratic needs greatly reduced. If damages other than lost earning capacity can also be determined in a fashion simpler than the one that now prevails, then, of course, administrative costs will be further reduced.

The emphasis in this section on the dual goals of reducing administrative costs and optimally deterring accidents is meant to highlight the dissimilarity between the aims of self-assessment and "no-fault" systems. In a prototypical no-fault tort system,⁶¹ it is the first half of the trial that is directly avoided. The system dictates a recovery by the injured party without any fault or liability determination.⁶² To some extent, of course, various nonfault pro-

ment of Transp., Auto. Accident Litig., A Report of the Fed. Jud. Center to the Dep't of Transp. (1970) (reporting that such litigation occupied 11% of judges' time in federal district courts and 17% of judges' time in state courts of general jurisdiction). These percentages convert to more than \$130 million in court costs. The average cost per trial is about \$4,200 in a state court and \$7,800 in a federal court. *Id.*

⁶⁰ The less predictable these awards are, the more difficult it is for a family to be certain about its future income and expenses. Thus, the assertion in the text relies on the general preference for certainty and the distaste for "volatility risk." See W. Klein, *Business Organization and Finance* 147-48, 151-53 (1980).

⁶¹ See generally R. Keeton & J. O'Connell, *supra* note 52.

⁶² Professors Keeton and O'Connell provide that: "Basic and added protection . . . for

posals preserve the ability of a severely injured party to sue a tortfeasor.⁶³ That is, both halves of the traditional tort trial remain available in some cases. Yet it is by eliminating a large number of these traditional suits that no-fault is expected to decrease administrative costs.⁶⁴ Once the first half of the trial is avoided, a no-fault system must still determine the level of compensation. There are a number of ways of accomplishing this task,⁶⁵ but it is fair to generalize that compensation would come from first-party insurance and that the costs of determining compensation would be reduced by eliminating or greatly modifying recovery for pain and suffering⁶⁶ and by utilizing compensation "schedules" that would dictate some payment levels and place ceilings on various payouts.⁶⁷ To the extent that compensation is not precisely predetermined, there will be room for arbitration and litigation and, therefore, some remaining administrative costs.

In sum, a no-fault system is bound to save administrative costs, increase the number of injuries that are compensable⁶⁸ unless there

persons suffering loss from accidental injury are [sic] due under the conditions in this Act *without regard to fault*." Id. at 308 (emphasis added).

⁶³ Id. at 323 (exempting all those covered under the basic plan from tort liability unless there is more than \$5,000 of pain and suffering at stake, or \$10,000 of other damages). See also R. Keeton, *Insurance Law* § 4.10 (1971) (describing the preservation of tort claims under the Massachusetts and Puerto Rican no-fault statutes). But see C. Gregory, H. Kalven & R. Epstein, *Cases & Materials on Torts* 888-93 (3d ed. 1977) (noting the Report of the Royal Commission of Inquiry on Compensation for Personal Injury in New Zealand, which proposes to abolish virtually all tort actions in favor of a no-fault, scheduled system).

⁶⁴ No-fault plans aim to decrease the number of trials while at the same time attempting to increase the number of persons actually compensated. See R. Posner, *supra* note 57, § 6.16, at 156 (noting that the strategy of the Keeton-O'Connell Basic Protection Plan is to increase the number of accident victims who are compensated but to reduce the average compensation).

⁶⁵ For a comparison of benefits packages provided for by state no-fault statutes as of February, 1978, see ABA Special Comm. on Auto. Ins., *Legislation, Automobile No-Fault Insurance*, app. B at 78 (1978) (summarizing state no-fault statutes).

⁶⁶ See, e.g., R. Keeton & J. O'Connell, *supra* note 52, at 305, 358-62.

⁶⁷ Id. at 309 (limiting recovery for work loss and placing a ceiling on any single total recovery).

To the extent that a no-fault system does not use scheduled damages but instead tries to pay for losses as they occur, it must refuse to compensate for some elements of damage or rely arbitrarily on past data rather than examine the victim's circumstances for a determination of the true damages that have been incurred. See R. Keeton, *Insurance Law* § 4.10 (1971) (noting that under the Massachusetts no-fault statute recovery for lost earning power is limited to 75% of the injured person's average weekly wage for the year immediately preceding the accident).

⁶⁸ Claimants will, after all, recover regardless of fault and need not risk the loss of court

are large deductibles,⁶⁹ and decrease the average recovery⁷⁰ except to the extent that cost savings are passed on and the plaintiff's legal costs are decreased. On the other hand, a self-assessment system will save different administrative costs,⁷¹ probably save less of these costs, leave unchanged the number of compensable injuries, and place no arbitrary limits on recoveries. Self-assessment seeks to yield full compensation for victims. Moreover, it does not resort to first-party insurance for each recovery and, therefore, leaves undisturbed the deterrence feature of the current fault-based tort system.

B. The Difficulty of Institutionally Assessing Lost Earning Capacity

That tort damages are, as the current system's critics suggest,⁷² both expensive and widely fluctuating in amount results directly from the difficult task of determining lost earning capacity. Consider a relatively simple case in which a tortfeasor has been found responsible for a victim's injury and resultant unemployment during a two-year convalescence commencing after the trial's conclusion.⁷³ Ideally, the injured party has been on a stable career path and there will be little disagreement about the expected salary for the next two years. Still, the court will make its award in a lump sum⁷⁴—that is, the defendant will pay the determined damages to

costs in making their claims under a no-fault system.

⁶⁹ Large deductibles will decrease the number of insurance claims. These deductibles would need to be significantly greater than the amount that currently triggers a lawsuit in order to yield fewer recoveries than the traditional tort system.

⁷⁰ There will be more small claims (because a claimant need not risk the costs of litigation) and effective ceilings on some large claims. See *supra* note 67.

⁷¹ Self-assessment will save administrative costs associated with the second half of the tort trial. To some extent, of course, the costs of assessment decisions are shifted from an institutional assessor to self-assessors. The removal of these assessments from the reach of the courtroom and the adversarial process will itself decrease costs. Moreover, the self-assessor, who is more familiar with the necessary details, can be expected to function more accurately and less expensively.

⁷² See *supra* note 52.

⁷³ Normally there will be pretrial evidence to help or hinder forecasters of post-trial events. For expository ease, the discussion in the text assumes a trial immediately after the injury.

⁷⁴ See 2 F. Harper & F. James, *The Law of Torts* § 25.2 (1956) (noting that the "principle of single recovery" requires the present determination of future damages and is, therefore, difficult to carry out and is immutable once decided).

An alternative to the lump sum payment is a system of periodic payments that can in-

the plaintiff in one stroke. Each dollar that would have been earned in the second year is less valuable than a dollar earned in the first year; the latter dollar can, after all, earn interest until the next year arrives. To offset this interest-earning capacity, the court must discount the earnings to their present value.⁷⁵ What interest rate should be used in this discounting process?⁷⁶ What about the

crease or decrease as the victim's condition improves or declines. See generally Fleming, *Damages: Capital or Rent?*, 19 U. Toronto L.J. 295 (1969) (comparing and contrasting lump sum awards and periodic payments in a comparative law framework); Henderson, *Periodic Payments of Bodily Injury Awards*, 66 A.B.A. J. 734 (1980) (advocating adoption of the Model Act for Periodic Payment of Judgments of the National Conference of Commissioners of Uniform State Laws). See also *Gretchen v. United States*, 618 F.2d 177, 181 n.5 (2d Cir. 1980) (suggesting that although periodic remedies were unavailable to the federal courts absent specific legislative authorization, the parties could negotiate a settlement in the form of an annuity subject to amendment if conditions changed). But see R. Posner, *supra* note 57, § 6.13, at 144-45 (advocating lump sum payments on two economic grounds: economizing on administrative costs and avoiding the disincentive effects of tying continued payments to continued disability).

⁷⁵ *Chesapeake & O. Ry. v. Kelly*, 241 U.S. 485 (1916) (in comparing damages recoverable for the deprivation of future benefits, the principle of limiting recovery to compensation requires that adequate allowance be made for the earning power of money).

⁷⁶ The rate of interest to be used in the discounting process is by no means a settled issue of law. See, e.g., *Blue v. Western Ry.*, 469 F.2d 487 (5th Cir.) (error to instruct jury to reduce award through the utilization of an unusually high interest rate equivalent to the return on high-grade corporate securities prevailing at the time and place of trial; rather, jury should have been instructed to reduce the award for loss of future earnings through the use of an appropriate interest rate over the period of the remaining anticipated work life of plaintiff), cert. denied, 410 U.S. 956 (1972); *Wilkinson v. Yamashita-Shinnihon Kisen, K.K.*, 366 F. Supp. 110 (D. Md. 1973), modified mem., 538 F.2d 327 (4th Cir. 1976) (because the court allowed the plaintiff the benefit of present economic conditions in computing his future losses, it is appropriate to recognize the fact of present high interest rates and use five percent as the discount rate for computing present value of future losses); *Greene v. Wright*, 365 So. 2d 551 (La. App. 1978) (use of discount rate of six and one-eighth percent ruled neither improper nor inaccurate); *Daniels v. Anderson*, 195 Neb. 95, 237 N.W.2d 397 (1975) (use of discount rate of six percent ruled not clearly erroneous).

Although damages for loss of future earnings are uniformly discounted to present value, damages for future pain and suffering usually are not. See, e.g., *O'Byrne v. St. Louis S.W. Ry.*, 632 F.2d 1285 (5th Cir. 1980) (although damages awarded for future earnings and medical expenses should be reduced to present value, damages for future pain and suffering should not); *Aretz v. United States*, 456 F. Supp. 397 (S.D. Ga. 1978) (under Georgia law, award for future pain and suffering need not be reduced to present value), *aff'd*, 604 F.2d 417 (5th Cir. 1979). See also *Henderson v. S.C. Loveland Co.*, 390 F. Supp. 347 (N.D. Fla. 1974) (recognizing that although it is inappropriate to discount damages awarded for pain and suffering, it is permissible to consider the probable yearly return on the lump sum award in assessing the amount to be awarded). But see *Oberhelman v. Blount*, 196 Neb. 42, 241 N.W.2d 355 (1976) (finding it just as essential that the value of future pain and suffering be reduced to present worth as it is that the value of loss or impairment of future earnings be reduced to its present worth).

fact that next year's job, however stable, would probably have yielded a salary that would increase along with inflation? Need the court listen to economic forecasters predict the future inflation rate,⁷⁷ or can inflation be ignored on the grounds that the lump sum recovery can be invested in a vehicle that keeps up with inflation?⁷⁸ Does this mean that inflation and the interest rate offset each other,⁷⁹ or is there a "real" rate of interest that is positive and must be used in the discounting process even in a world with no

⁷⁷ Whether courts should entertain testimony regarding inflation to offset or reduce the discount rate is probably the most unsettled and controversial issue in computation of damage awards. Compare *Sauers v. Alaska Barge*, 600 F.2d 238 (9th Cir. 1979) (failure to take inflation into account in some appropriate manner in calculating the size of plaintiff's damage award constituted error when court was faced with sound and substantial evidence pertaining to the impact of inflation), *United States v. English*, 521 F.2d 63 (9th Cir. 1975) (trier of fact may take into account future estimates of changes in the purchasing power of money in arriving at a damage award under California law, but only changes based on sound and substantial evidence), and *District of Columbia v. Barriteau*, 399 A.2d 563 (D.C. 1979) (it is proper for the jury to consider the impact of future inflation in arriving at future loss of income in personal injury cases) with *Johnson v. Penrod Drilling Co.*, 510 F.2d 234 (5th Cir. 1975) (ruling that the influence on future damages of possible inflation or deflation is too speculative a matter for judicial determination), *In re United States Steel Corp.*, 436 F.2d 1256 (6th Cir. 1970) (declining to permit the prospect of a future decline in the purchasing power of the dollar to be used to offset the reduction to present value), and *Sleeman v. Chesapeake & O. Ry.*, 414 F.2d 305 (6th Cir. 1969) (district court's decision not to discount award, based on inflationary trends, ruled improper).

Harper and James sum up the problem as follows:

Future trends in the value of money are necessarily unknown and so always render such damages speculative in a way we cannot escape. If the estimates represent a straight-line projection of present living costs, they will be frustrated by fluctuations either way. If prophecy of change is heeded, frustration will follow if no change, or the opposite change, occurs.

F. Harper & F. James, *supra* note 74, § 25.11, at 1325.

See also Formuzis & O'Donnell, *Inflation and the Valuation of Future Economic Losses*, 38 Mont. L. Rev. 297 (1977); Note, *Future Inflation and the Undercompensated Plaintiff*, 4 Loy. U. Chi. L.J. 359 (1973); Note, *Future Inflation, Prospective Damages, and the Circuit Courts*, 63 Va. L. Rev. 105 (1977).

⁷⁸ Corporate revenues, for example, vary with the price level so that corporate earnings and stock market prices also vary with inflation. This is not to say that investments in the stock market outperform other investments during an inflationary period. J. Lorie & M. Hamilton, *The Stock Market: Theories and Evidence* 17-20 (1973).

⁷⁹ Two state courts have recently decided that, as a matter of law, the discount rate is always offset entirely and equally by inflation. See *Beaulieu v. Elliot*, 434 P.2d 665 (Alaska 1967) (award for loss of future earnings need not be reduced to present value); *Kaczowski v. Bolubasz*, 491 Pa. 561, 421 A.2d 1027 (1980) (as a matter of law, future inflation shall be presumed equal to future interest rates with these factors offsetting).

See also R. Posner, *supra* note 57, § 6.13, at 148 (noting that there is an economic case for using this "apparently naive method" for the estimation of lost earnings in an accident case).

inflation?⁸⁰ A few minutes with a calculator will convince the reader and the court that a small percentage difference in the discount rate will have an enormous impact on more extensive recoveries that involve discounting over many years.⁸¹ Perhaps the receipt of a lump sum is itself of value, as it opens investment options that are unavailable to the employed individual who must wait each year for his funds.⁸²

What about the fact that this tort recovery will be tax-free to the recipient?⁸³ Should the injured party recover pre-tax earning capacity, perhaps on deterrence grounds;⁸⁴ and if not, should the court entertain expert testimony on the likelihood of changes in

⁸⁰ See *Doca v. Marina Mercante Nicaraguense, S.A.*, 634 F.2d 30 (2d Cir. 1980) (ruling that inflation should be considered in estimating the present value of lost future wages; noting that courts cannot fail to recognize that inflation is a dominant factor on the current economic scene and, despite episodic recessions, is likely to be so for the foreseeable future; further noting that there is a fairly constant relationship between interest and inflation rates so that it is more reasonable to make a prediction about the relationship of both rates than about the level of interest rates alone; and, finally, suggesting but not requiring a two percent discount rate); *Feldman v. Allegheny Airlines, Inc.*, 524 F.2d 384 (2d Cir. 1975) (discount rate of 4.14% offset by inflation rate of 2.87%, yielding 1.27% discount rate, rounded up to 1.5%, ruled not improper under Connecticut law).

⁸¹ See, e.g., S. Speiser, *Recovery for Wrongful Death*, *Economic Handbook* § 3:2, at 30 (2d ed. 1975) (computing the value of \$100,000 due in 10 years to be \$82,000, \$61,400, and \$38,600 at discount rates of 2%, 5%, and 10%, respectively).

⁸² See Schaefer, *Uncertainty and the Law of Damages*, 19 Wm. & Mary L. Rev. 719 (1978) (noting that the present value of an income stream should itself be discounted to reflect the uncertainty of its actual receipt). But see F. Harper & F. James, *supra* note 74, § 25.2, at 1303-04 (pointing to the disadvantages of a lump sum award which is often unwisely invested so that it yields income that is an unstable substitute for the earnings that were lost).

It would seem that a lump sum can be invested in a way that complements the risk attitude of the investor. On the other hand, future wages depend on the employer's stability and future decisions so that their riskiness is less easily manipulated by an employee than is the riskiness of a capital investment by its investor.

⁸³ I.R.C. § 104(a)(2) (1976).

⁸⁴ An additional complication derives from the fact that the income obtained from investing the lump sum award will be taxable. Although the deterrence argument is a strong one, see *infra* notes 121-23 and accompanying text, the general rule favors the use of pre-tax income, for reasons of simplicity. See, e.g., *Griffin v. General Motors Corp.*, 1980 Mass. Adv. Sh. 937, 402 N.E.2d 402 (the assumption that plaintiff's wage loss is to be measured by gross earnings before taxes is in accord with the overwhelming weight of authority); *Girard Trust Corn Exch. Bank v. Philadelphia Transp.*, 410 Pa. 530, 190 A.2d 293 (1963) (adopting the majority rule that in fixing damages for the determination of decedent's earning capacity, the income tax consequences of the matter should not be taken into account). See also *Annot.*, 63 A.L.R. 2d 1393 (1959). But see *Norfolk & W. Ry. v. Lempelt*, 444 U.S. 490 (1980) (rejecting the notion that the introduction of evidence describing a decedent's estimated after-tax earnings is too speculative or complex for a jury).

the tax rates? Should the court, as assessor, consider the value of fringe benefits⁸⁵ or on-the-job training that may be lost?

If the injured party were not on a predictable employment path,⁸⁶ the court will be forced to face still more issues, the most basic of which are answerable only with brave speculation. Assume for example, that the injured party was a second-year law student with excellent grades and that a two-year recuperation period will postpone the completion of law school. The starting lawyer's salary, the object of our victim's dreams, is not that far off. Even if the discounting process can quantify the two-year delay, many difficult questions arise. A small one, of course, involves the prediction of tuition increases. Although the amount at stake may be relatively small, unless the parties can agree on an amount, the second half of the trial will be extended to include this issue. More important, how should the jury decide—and how much information should they receive on the question of—whether the injured student would have opted for a lucrative big job, a less remunerative small town practice, a government job, a legal aid position, or a seat in graduate school?⁸⁷

⁸⁵ Fringe benefits are usually recoverable as items included in estimated lost earning capacity. See, e.g., *In re United States Steel Corp.*, 436 F.2d 1256, 1274 (6th Cir. 1970) (the fact that court-appointed commissioners converted the parties' evaluations of the decedents' fringe benefits to percentages of their estimated lost wages for purposes of computation does not render the commissioners' awards subject to attack for lack of specificity); *Wilkinson v. Yamashita-Shinnihon Kisen, K.K.*, 366 F. Supp. 110, 116 (D. Md. 1973) (claimant entitled to recover the economic fringe benefits of working as a longshoreman to the extent that he has lost them as a result of the injury); *Curry v. United States*, 338 F. Supp. 1219, 1223 (N.D. Cal. 1971) (earning capacity includes the possibility of fringe benefits).

⁸⁶ For a discussion of what damages to award to an injured party who was on an unemployment path, see *Espana v. United States*, 616 F.2d 41 (2d Cir. 1980) (full-time capacity only relevant for an unemployed party who will, or is willing to, work, such as a student or housewife; otherwise, sporadic employment is itself predictable and plaintiff is limited in recovery to work he was actually able to obtain).

⁸⁷ For a somewhat unsatisfying attempt to deal with this difficult prediction problem, see *Feldman v. Allegheny Airlines, Inc.*, 382 F. Supp. 1271 (D. Conn. 1974) (court finds that decedent, a college graduate admitted to, but not yet attending law school, probably would have chosen immediate employment as a legislative analyst instead of attending law school, would have been hired by the National League of Cities and United States Conference of Mayors as a GS-12 with increments in salary as provided in the federal government's GS pay scales, would have spent eight years in which her principal occupation was childrearing but would have remained in sufficient contact with her field to maintain her earning capacity and would have retired at age 65), *rev'd in part and remanded*, 524 F.2d 384 (2d Cir. 1975). See also *Frankel v. Heym*, 466 F.2d 1226 (3d Cir. 1972) (award based on testimony that plaintiff, a 19-year-old commercial art student, would have worked continuously as a

If a serious injury ends the tort victim's worklife, there are additional conceptual difficulties because an employee's income over time is, to some extent, related to the performance of the economy as a whole. At the very least, the institutional assessor must speculate as to the victim's career path, including promotions and lay-offs.⁸⁸ This task is hardly simplified by a court's willingness to extrapolate from data about past and current *average* earnings within the victim's profession or industry.⁸⁹ These averages are computed from large pools, and the parties in a specific case will disagree about the ways in which the victim's own talents, training, education, promotional history, regional location, family stability, and energies ought to modify any use of a raw average.⁹⁰

commercial artist until normal retirement age, with interruptions for childbearing, ruled not arbitrary or unreasonable); *Whittle v. Schemm*, 402 F. Supp. 1294 (E.D. Penn. 1975) (although in many cases that have permitted reference to the reduced earning capacity of a student, the student was already enrolled in a specialized training program leading to a career at the time of injury, there appears to be no requirement to this effect; when an expert gives an opinion that is based on facts or testimony in the record, it is the jury's function to determine what weight, if any, should be given to his testimony), *aff'd*, 538 F.2d 322 (3d Cir. 1976); *Clinchfield Ry. v. Forbes*, 57 Tenn. 174, 417 S.W.2d 210 (1966) (any competent evidence relevant to a person's earning capacity is admissible and it is for the jury to consider all the evidence on the question and give the proper weight to each part of the evidence).

⁸⁸ See, e.g., *Edwards v. Sims*, 294 So. 2d 611 (La. 1974) (the probability of promotion or progress in job status may be considered when supported by competent evidence).

⁸⁹ See, e.g., *Plourd v. Southern Pac. Transp. Co.*, 266 Or. 666, 677, 513 P.2d 1140, 1146 (1973) (taking judicial notice of the history of wage increases for railroad workers for the past 25 years, including increases at an average rate of at least 5% per year with a much higher rate of increase during the past five years, and ruling that it is not "pure speculation" for a qualified expert witness to infer from such a part history that during the next 23 years wage rates will continue to increase at an average of at least 5% per year).

⁹⁰ See, e.g., *Drayton v. Jiffee Chem. Corp.*, 591 F.2d 352 (6th Cir. 1978) (a more reasonable result is reached when the sex, race, personality, demonstrated intelligence and other factors of plaintiff are balanced and one amount is reached, than when a specific figure is assigned to any or all of the foregoing values); *Baker v. Baltimore & O. Ry.*, 502 F.2d 638, 644 (6th Cir. 1974) (jury was entitled to consider the extent of plaintiff's injuries, his education, station in life, and character in assessing lost earning capacity); *Potter v. Mulberry*, 100 Idaho 429, 432, 599 P.2d 1000, 1003 (1979) (the value of one's earning capacity is ordinarily determined from proven facts of age, capacity, state of health, present income, and other relevant facts, rather than from the estimates and opinions of witnesses); *Viator v. Gilbert*, 253 La. 81, 85, 216 So. 2d 821, 822 (1968) (in attempting to arrive at the correct measure of damages for loss of future earnings, it is essential that the court direct its attention to plaintiff's physical condition prior to the accident, his work record, the amount of his earnings and the likelihood that he would have been able to earn similar amounts for a number of years but for the accident); *Weidmer v. Lineback*, 82 S.D. 8, 13, 140 N.W.2d 597, 602 (1966) (loss of earning capacity is an element of general damages that permits an injured party to

Even if we assume that a likely or average promotion pattern is "determined" and that past pay increases over time as well as pay differentials among jobs can be used to predict the future, our task is incomplete. To avoid double counting, the assessor should also subtract the fraction of these promotions and increases that have already been included by way of the discounting process and the decision to end the case with a lump-sum award. Often such promotions are already included in damage awards as compensation for the victim's probable productivity increases. After all, to some extent a firm can afford increases and promotions because the firm itself has enjoyed a productivity increase. The firm's growth may reflect nothing more than its good fortune in being part of a growing and innovative economy. Yet, an individual who invested capital in this economy will also share in its growth. In this manner, if the lump sum award is invested in the economy—and it is difficult to put it elsewhere—it will in some way track the productivity increases that the injured party could have expected had he continued in the work force.

Unfortunately, this direct relationship between returns in the capital market and the labor market does not obviate the need to predict promotion paths and productivity increases. Some industries will outperform the average; some individuals will be promoted faster than others and earn productivity increases that in percentage terms exceed those of the economy as a whole. The assessor must therefore predict both the increases and the fraction of these increases that must be cast aside to avoid double counting.

This hopeless situation is further complicated by the announced intention of the law to consider "lost earning capacity" as opposed to actual "lost earnings."⁹¹ To be sure, this standard makes some

recover for loss of earning power in the future based on such factors as the nature and extent of the injury, age, life expectancy, talents, skill, experience, training, education, and industry).

⁹¹ Under the majority rule, a tort victim suing for damages for permanent injuries is permitted to base his recovery "on his prospective earnings for the balance of his life expectancy at the time of his injury *undiminished by any shortening of that expectancy as a result of the injury.*" *Sea-Land Servs. v. Gaudet*, 414 U.S. 573, 594 (1974) (quoting 2 F. Harper & F. James, *supra* note 74, § 24.6, at 1293-94) (emphasis in original). See also *Frankel v. Todd*, 393 F.2d 435 (3d Cir. 1968) (emphasizing that under Pennsylvania law, a jury may consider plaintiff's future loss of earning capacity as an element of damages, even though plaintiff was making more money at the time of trial than at date of accident); *Flick v. James Monfredo, Inc.*, 356 F. Supp. 1143, 1150 (E.D. Pa. 1973) (the fact that earnings

of the assessor's questions easier to answer.⁹² For example, the previously discussed law student ought to be awarded a recovery based on the highest paying job available. Under the lost earning capacity standard, there is no need to speculate that this student might dally in a less remunerative job. In a narrow sense, this is consonant with simple economic principles. By accepting a low paying job in lieu of a higher paying one, an individual demonstrates that the total returns from the chosen position—monetary and nonmonetary—are valued more than those from the job not taken. Thus, the injured party ought to get *at least* the amount of the highest offer.⁹³

have increased after injury does not bar recovery for impairment of earning capacity); *Frankel v. United States*, 321 F. Supp. 1331 (E.D. Pa. 1970) (in claim for future loss of earning capacity, the question is to what extent the economic horizon of plaintiff has been shortened because of the injuries); *Steeves v. United States*, 294 F. Supp. 446, 456 (D.S.C. 1968) (in considering damages suffered by plaintiff, it is quite clear that impairment to future earning capacity is a necessary and proper element of damages and the fact that one is unemployed at the time of injury does not deprive one of the right to such damages; unemployed 11-year-old therefore allowed to collect for lost earning capacity); *Jerz v. Humphrey*, 160 Conn. 219, 222, 276 A.2d 884, 886 (1971) (in determining whether there is a loss of earning capacity, the essential question is whether the plaintiff's capacity to earn is hurt); *Gault v. Monongahela Power Co.*, 223 S.E.2d 421 (W. Va. 1976) (a plaintiff has the right to be compensated for impairment of his physical capacity and impairment of his ability to earn, regardless of whether or not he intends to work); *Jordan v. Bero*, 210 S.E.2d 618, 636-37 (W. Va. 1974) (undoubtedly, even an infant plaintiff who has never been gainfully employed may recover damages for impairment of his future earning capacity; during his minority, his parents or guardians may also recover damages for such impairment or loss of earning capacity proximately resulting from the negligent conduct of defendant); *Ballard v. Lumbermens Mut. Cas. Co.*, 33 Wis. 2d 601, 608, 148 N.W.2d 65, 69 (1967) (in determining past and future loss of earning capacity the question is not whether plaintiff would have worked by choice, because he is entitled to compensation for his lost capacity to earn, whether he would have chosen to exercise it or not); *McLaughlin v. Chicago, M., St. P. & P.R.R.*, 31 Wis. 2d 378, 394, 143 N.W.2d 32, 40 (1966) (damages could be awarded for impairment of plaintiff's capacity to teach, notwithstanding his vow of poverty upon ordination as a priest).

⁹² Of course, the easiest approach in such cases would be to limit wage recovery to actual lost wages in the plaintiff's present position, as many no-fault plans require. See, e.g., *supra* note 67.

⁹³ Although this approach would be conceptually consistent with the court's adherence to assessing lost earning capacity, in practice courts shy away from such a position. See, e.g., *Feldman v. Allegheny Airlines, Inc.*, 382 F. Supp. 1271, 1283 (D. Conn. 1974) (noting that, because a law degree normally enhances earning capacity, a decision to assess the decedent's future earning capacity as if she had chosen employment as a legislative assistant was necessarily conservative), *rev'd in part and remanded*, 524 F.2d 324 (2d Cir. 1975).

If courts were inclined to take *everything* into account in their assessment of lost earning capacity, they could award damages based on the highest possible income, but discount them by the probability that plaintiff would have attained that level of earnings. See Schae-

But once we accept the notion of including the nonmonetary value of "psychic" pleasures in the calculus, the institutional assessments by judges and juries become still more disputable. Should the jury be instructed to consider evidence about individual or average tastes for leisure time?⁹⁴ If so, should an amount be subtracted from the lost earning capacity that represents the leisure time now available during recuperation?

The problems associated with the use of lost earning capacity as the standard for damage awards are the most interesting of the valuation difficulties. Conceptually, these measurement problems are the same as those encountered in any attempt to tax "imputed income," or accretions to wealth that are not easily associated with a known market transaction.⁹⁵ If the earlier analysis concerning the law student who chooses the low paying career path is correct, then perhaps he should pay income taxes based on the foregone higher salary. That the Internal Revenue Code does not go this far in defining taxable income⁹⁶ reflects, among other things, the difficulty of managing such a system and society's uneasiness about taking capacity as seriously as reality.

Still, given that the law professes to award lost earning capacity in the area of tort damages, it is appropriate to consider both the valuation problems thereby raised and the extent to which institutional assessors abide by this standard of earning capacity. Consider the case of an injured law professor who had chosen the aca-

fer, *supra* note 82, at 769 (suggesting that courts deal with uncertainty in estimating the value of a plaintiff's lost earnings by including an expected value deduction, so that the earnings estimate represents an average of all possible outcomes and discount for risk).

⁹⁴ For example, two identically injured individuals may be unequally damaged because only one enjoys the books and television that are available during recuperation. That courts would not differentiate among these individuals is illustrative of the failure of conventional assessment to individualize damage awards more fully and accurately. In fact, courts might use the availability of "leisure time" as a way of *increasing* the award for pain and suffering. See, e.g., *Henderson v. S.C. Loveland Co.*, 390 F. Supp. 347, 352 (N.D. Fla. 1974) ("[F]ormerly active, now [plaintiff] spends most of his days doing little more than sitting, watching television and leading a humdrum existence. With him there has been, from the evidence before this court, a great loss of capacity for enjoyment of life, 'compounding and increasing his pain, suffering and mental anguish.'").

⁹⁵ See generally 1 B. Bittker, *Federal Taxation of Income, Estates and Gifts* § 5.3 (1981).

⁹⁶ It is congressional silence, more than any particular implication of the Code's definition of income, see I.R.C. § 61 (1976), that saves the law student in the text from an enormous tax bill. On the other hand, the Code does deal with imputed income in a number of small, fragmented ways. See 1 B. Bittker, *supra* note 95, § 5.3.2.

demic life rather than a lucrative tax practice. If the professor's attorney can convince the jury that, at the time of the injury, such a lucrative practice was still available to his client, should the damage award be based on the professor's higher hypothetical earnings capacity? Should a laborer be able to show that he could have taken a high paying job on the Alaska pipeline or in the Saudi oilfields, even though such earnings would require a radical change in lifestyle?

It appears that despite its insistence on the concept of "capacity," the case law limits the working victim's lost earnings capacity to his chosen career path.⁹⁷ It is suspected, for example, that the laborer would be limited to possible promotions and income within his industry or region,⁹⁸ and that a law professor would be awarded damages on the basis of professorial pay, regardless of his potential earning capacity in private practice.

Valuing the services of the stereotypical housewife presents a familiar problem.⁹⁹ Income taxes are not imputed to the services of

⁹⁷ See, e.g., *Hanson v. Reiss S.S. Co.*, 184 F. Supp. 545 (D. Del. 1960) (award, based on stone mason's pay to injured seaman who had once worked as a stone mason's apprentice, ruled too speculative to form the foundation of a judgment); *Condrion v. Hurl*, 46 Hawaii 66, 71, 374 P.2d 613, 618 (1962) (plaintiff's training, experience, and established line of work supply the setting for measurement of lost earning capacity); *Pinkstaff v. Pennsylvania Ry.*, 24 Ill. 507, 163 N.E.2d 728 (1959) (trial judge was correct in ruling that evidence of earnings in job available to, but not taken by, plaintiff was inadmissible); *Norris v. Elmdale Elevator Co.*, 216 Mich. 548, 550, 185 N.W. 696, 698 (1921) (plaintiff's damages for impairment of earning capacity should be measured by the impairment of earning capacity in his usual employment).

⁹⁸ See, e.g., *McGuire v. Lykes Bros. S.S. Co.*, 486 F. Supp. 1374, 1379 (E.D. Wis. 1980) (conclusion that plaintiff was 100% disabled was supported by the fact that his background, training, and past employment history were all in the field of heavy industrial work, notwithstanding the fact that he was physically able to perform nonindustrial, sedentary work). See also *Hershiser v. Chicago, B. & Q. R.R.*, 102 Neb. 820, 170 N.W. 177 (1918) (where a plaintiff seeks to prove damages accruing by reason of lost wages and earning capacity, the inquiry should be as to what he was able to earn in or near the locality where he lived, or where he was reasonably likely to exercise his calling, and it is error to admit evidence as to his earning capacity at a distant point in another state where he is unlikely to labor); *Texas & P. Ry. v. Crown*, 220 S.W.2d 294, 300 (Tex. Civ. App. 1949) (proof of earnings before and after the injury constitutes the best evidence of the extent of lost earning capacity).

⁹⁹ See Note, *Tort Damages for the Injured Homemaker: Opportunity Cost or Replacement Cost?*, 50 U. Colo. L. Rev. 59 (1978) (outlining the evolution of the homemaker's tort damages and current methods of valuation, and arguing that foregone opportunity costs should be relevant and admissible evidence in ascertaining a homemaker's damages); Note, *How Much is a Good Wife Worth?*, 33 Mo. L. Rev. 462, 466-73 (1968) (discussing methods of proof for value of a wife's services—by presumption, by amounts actually paid, by testimony of family and friends, or by expert testimony). See generally Komesar, *Toward a Gen-*

the housewife. Unless offset by a childcare credit or some similar device, there is an implicit tax imposed on the housewife who takes a paying job and hires a housekeeper to replace herself in the home.¹⁰⁰ In another context, it has been argued that marital rights, pension claims, and divorce settlements would be more equitable if the value of intrafamily services, such as housework, were quantified.¹⁰¹ It may appear that the common-law right of tort recovery for a wife's services was an early precursor of this "capacity" or nonmarket approach that is now suggested in other areas. The reality of the matter is, of course, that the law was sensitive to the loss of services from a chattel damaged in tort, and a wife was regarded as her husband's chattel.¹⁰²

If a court is willing to consider the value of a housewife's services as something other than what it would cost to hire a housekeeper

eral Theory of Personal Injury Loss, 3 J. Legal Stud. 457 (1974) (arguing that all personal injury damages can be analyzed profitably in the same terms as those accepted for earning capacity—where the value of time is the crux of the matter—and that the present damage structure may have disregarded, or at least misperceived, much of the value of the time loss).

¹⁰⁰ See 1 B. Bittker, *supra* note 95, § 5.3. See generally Weitzman, *Legal Regulation of Marriage: Tradition and Change*, 62 Calif. L. Rev. 1169, 1187 (1974) (noting that the woman's obligations as wife, homemaker and mother are so basic to the legal conception of family roles that one may view a wide range of case law that supposedly deals with other issues as merely a vehicle for ensuring that women are not sidetracked from their domestic duties).

¹⁰¹ See Foster & Freed, *Spousal Rights in Retirement and Pension Benefits*, 16 J. Fam. L. 187 (1977-78) (urging that, despite difficulties in evaluation, services as a wife, homemaker, mother and career builder for her husband may be given a price tag and that homemaker services must be recognized as significant in determining the economic incidents of divorce; special reference and discourse given to pension and retirement benefits as issues upon divorce); Weitzman, *supra* note 100, at 1192 (noting that the separate—as opposed to the community—property system disregards the wife's contribution to the family property, that the woman who has contributed to the growth of her husband's business, career, property, or income during the marriage generally finds that her contribution to the partnership is unrecognized in law, and that upon dissolution the partnership is treated as a one-man business, and she is cheated out of a fair share for her half of the effort).

¹⁰² Komesar, *supra* note 99, at 469-71 nn.27-31. See, e.g., *Snashell v. Metropolitan R.R.*, 19 D.C. (8 Mackey) 399 (1890) (Married Woman's Property Act notwithstanding, a married woman does not possess the capacity to sue in her own name for personal injuries, or the capacity to make any contract relating to them); *Shaddock v. Town of Clifton*, 22 Wis. 114 (1867) (in an action by husband and wife to recover for injuries done to the person of the wife, such damages, when recovered, are not the separate property of the wife under the statute enlarging the rights of married women as to property; thus the damages belong to the husband; he may reduce them to possession and dispose of them as he pleases; he controls the action and may continue it or give a release; any settlement made or discharge properly given by him will bind the wife).

and reimburse the husband for loss of consortium,¹⁰³ then the difficulties that attend the prediction of a career path—other than the one in which the victim has recently traveled—will again arise. The existence of these difficulties should not obscure the powerful argument in favor of such a capacity-based recovery.¹⁰⁴ The family may have chosen to go through life with one taxable breadwinner and a housewife, even though this housewife could have earned far more in the marketplace than does the hypothetical housekeeper whose services are frequently imputed to her by the assessing court.¹⁰⁵ The family has thus demonstrated, tax considerations aside, that the value of having this healthy housewife in its home exceeds her value in the marketplace.

It would be a mistake, however, to award as damages to an injured housewife the income she could have earned in the market. The cost of employing a professional housekeeper would have to be subtracted first. After all, this is a real cost that would have been incurred in the event of such employment. If the housewife's earnings are to be hypothesized, then the costs necessary to generate these earnings must also be considered.¹⁰⁶

¹⁰³ The cost of hiring a housekeeper and reimbursing the husband for loss of consortium, commonly known as the "replacement cost approach," is the approach used pervasively by courts today. See, e.g., *Har-Pen Truck Lines, Inc. v. Mills*, 378 F.2d 705, 712 (5th Cir. 1967) (upon wrongful death of wife and mother, damages for the value of her lost services are best calculated as the cost to her husband and children of replacing those services); *Legare v. United States*, 195 F. Supp. 557 (S.D. Fla. 1961) (amount of damages in wrongful death of wife and mother based on the expense to the father of providing the children a home, the services of a suitable person to run it and minister to the children's needs, and the services of domestic help); *Merrill v. United Air Lines, Inc.*, 177 F. Supp. 704 (S.D.N.Y. 1959) (in action to recover for death of mother, plaintiff was entitled to offer testimony of professional home economist to prove estimated replacement costs to surviving children caused by deprivation of their mother's services). For discussion of an alternative approach, see *infra* note 104.

¹⁰⁴ See R. Posner, *supra* note 57, § 6.13, at 145; Note, *Tort Damages for the Injured Homemaker: Opportunity Cost or Replacement Cost?*, *supra* note 99 (arguing that the opportunity cost approach permits a high degree of certainty in assessing the minimum value of the services to the family above mere replacement cost without allowing either jury conjecture or self-interested statements by the individual.)

¹⁰⁵ See *supra* note 103.

¹⁰⁶ These costs can include items as varied as workclothes and housekeepers. To the extent that courts adopt an uneconomic approach and adhere to the use of replacement rather than opportunity cost, the deductions for necessary expenses need not be made. To be sure, under *either* approach, when housewives are recuperating, they or their families can recover for housekeeping expenses that are incurred. See, e.g., *Platis v. United States*, 288 F. Supp. 254, 279 (D. Utah 1968) (a plaintiff may recover, as special damages, medical costs, property

More generally, institutional assessments must consider not only the capacity to earn but also the varying cost of living.¹⁰⁷ Such additional analysis may indicate that the assessment of lost earning capacity is somewhat simplified by the realities of living costs. In the case of the recuperating law student, for example, although it may be difficult to predict whether this victim would have earned a big city salary or the lower income associated with tendering legal services to the rural poor, the higher living costs in big cities and the lower entertainment and clothing costs incident to a rural job would tend to lessen the net monetary gap between the two career options.

In sum, the need to consider living costs as well as earning possibilities further complicates the task of institutional assessment of tort damages. The prediction of these living costs involves various areas of speculation. In the context of a trial, such determinations may take up considerable court time and perhaps even require the testimony of expert witnesses. The frequently inverse relationship between earned income and living costs, however, implies that the assessor's prediction as to the injured party's career path is less likely to mar the accuracy of the damage determination.¹⁰⁸

damage, and the cost of household help necessitated by the injury); *McCluggage v. United States*, 296 F. Supp. 485, 488 (S.D. Ohio 1966) (plaintiff-husband entitled to recover damages as compensation for his expenses in caring for his wife, and for losses of his wife's services in the home, consortium, and conjugal society); *Poche v. Frazier*, 232 So. 2d 851, 860 (La. App.) (sum expended to pay for care of children, while mother was unable to do so, was a legitimate expense arising as a direct consequence of the accident and should have been included in judgment), cert. denied, 256 La. 266, 236 So. 2d 36 (1970).

¹⁰⁷ See, e.g., *Drayton v. Jiffee Chem. Corp.*, 591 F.2d 352, 368 (6th Cir. 1978) (considering past statistical evidence submitted by economic experts concerning changes in the cost of living from time to time); *Johnson v. Serra*, 521 F.2d 1289, 1295 (8th Cir. 1975) (in assessing the amount of damages in both death and injury cases, Minnesota juries may consider "the inflationary trend of the economy" or "the present low purchasing value of money and the high cost of living"); *Dawydowycz v. Quady*, 300 Minn. 436, 200 N.W.2d 478 (1974) (factors relevant in determining damages include loss of earning power and the inflationary trend of the economy); *Clinchfield R.R. v. Forbes*, 57 Tenn. App. 174, 190, 417 S.W.2d 210, 217 (1966) (recognizing that no mathematical rules for a computation have ever been formulated to make verdicts and judgments uniform in negligence cases, but requiring courts to consider the nature and extent of the injuries, the suffering, expenses, diminution of earning capacity, inflation, age, life expectancy and amounts awarded in similar cases).

¹⁰⁸ In considering the proper treatment of living costs in the determination of damages, it becomes clear that the split among jurisdictions regarding the use of the survivors' perspectives or the estate's perspective in the event of a fatal injury is really not a serious one. See generally 1 S. Speiser, *Recovery for Wrongful Death* §§ 3:1-3:69 (2d ed. 1975). In general, in a loss-to-survivors approach the tortfeasor pays the survivors only what they would have

One final problem for the institutional assessor concerns the proper use of mortality tables¹⁰⁹ in those cases requiring an accurate assessment of the years remaining in the injured party's life.¹¹⁰ The assessor must decide whether to use mortality statistics that are general or ones that are finely tuned for a specific race, sex,

received from the decedent had he not died. In the loss-to-estate approach, the survivors recover all that would have come into the decedent's estate had he not died. If it is the value to survivors that ought to be measured, the compensable damage is the lost earning capacity—difficult as it may be to determine—minus both the amount that the victim would have himself consumed and the amounts that the victim would have contributed to beneficiaries other than his legal survivors. If the value-to-estate standard is in place, then again, it seems correct to take the capacity to consume as seriously as the capacity to earn. The two standards will yield comparable results except insofar as the survivors under the first standard must prove that the victim's income would have inured to their benefit.

¹⁰⁹ Mortality tables are generally held to be admissible but are not considered conclusive as to life expectancy. See, e.g., *Farmers Union Federated Coop. Shipping Ass'n v. McChesney*, 251 F.2d 441, 443 (8th Cir. 1958) (to assist the jury in determining the gross amount of lost earnings, where such decreased or lost earning capacity is considered permanent, standard mortality tables are admissible); *James v. State*, 154 So. 2d 497, 501 (La. App. 1963) (future wage losses based on mortality tables); *Sorenson v. Cargill, Inc.*, 281 Minn. 480, 488, 163 N.W.2d 59, 65 (1968) (mortality tables based on the average life of a large group of persons have considerable evidentiary value, but they are not decisive of the injured person's life expectancy or of the number of years his earning capacity would have continued undiminished if he had not been injured). But see *Morrison v. State*, 516 P.2d 402, 406 (Alaska 1973) (where no evidence was presented from which the court reasonably could infer that appellant had a shorter than normal life expectancy at the time of the accident, it was error to determine life expectancy to be other than that shown in standard mortality table; although mortality table is not binding upon court, there must be some evidence in order to justify departure from the table).

Many states make mortality tables admissible by statute, and some states either set out tables in the statutes or direct the court to commonly-used tables. See, e.g., *Colo. Rev. Stat. § 13-25-102* (1973); *N.C. Gen. Stat. § 8-46* (1981).

In calculating lost earning capacity, the court actually wants to know, not how long the injured party would have lived, but how long he would have earned income. This can be done by merely postulating a retirement age, see, e.g., *Feldman v. Allegheny Airlines, Inc.*, 382 F. Supp. 1271, 1286 & n.24 (D. Coun. 1974), rev'd in part and remanded, 524 F.2d 384 (2d Cir. 1975), or by using work-life tables, see, e.g., *Larsen v. IBM Corp.*, 87 F.R.D. 602, 611 (E.D. Pa. 1980).

¹¹⁰ In the case of a nonfatal injury, mortality tables enable the court to award damages based on the expected life of the victim had there been no injury. See *supra* note 91. As a result of the tort, the plaintiff's actual expected life may be much shorter. Thus, the tortfeasor compensates the victim for his shortened life expectancy. Some courts, however, have rejected this logic. See, e.g., *Ehlinger v. State*, 237 N.W.2d 784 (Iowa 1976) (following the minority rule that shortened life expectancy caused by the injury may be used to reduce damages when determining loss of earning capacity).

Great Britain applies the minority American rule and consequently underdeters the tortfeasor. Fleming, *The Lost Years: A Problem in the Computation and Distribution of Damages*, 50 Calif. L. Rev. 598, 700 (1962).

family history, occupation, and location.¹¹¹ Moreover, a resourceful plaintiff ought to claim that the selected mortality table be modified to exclude compensable deaths. For example, the victim who is fatally injured at age sixty should not have his recovery diminished by the probability that another tortious injury might have taken place at age sixty-five.¹¹² After all, the first tortfeasor has put the victim in a position such that he is no longer able to recover from the "second" tortfeasor.

The ultimate irony and disgrace of conventional tort law damage determination is in the actual disposition of all these questions. If counsel take these issues seriously, so that the determination of damages is an honest attempt to compensate the unfortunate victim of a tort, the jury will be exposed to a mind-boggling series of issues and experts. Once faced with the evidence, the jury must speculate, calculate probabilities, and modify industry averages; in short, the jury must do all those things that this article already has described as being virtually impossible. Moreover, the jury must do this for all the components of damages, not just lost earning capacity.

The call for change in the determination of tort damages is motivated therefore by the concern that subjectivity must attend the virtually impossible task of assessing such damages accurately. It is not possible to adduce statistics regarding the inaccuracy of these assessments as it was in the case of property tax assessment. Institutional property tax assessment is difficult because of the nature of the concept of market value and because of the potential for careless and extralegal behavior by assessors. Conventional tort damage assessment is at least as troublesome because the path of a human life is incredibly complex and unpredictable. The questions and issues discussed in this section paint a depressing picture of the likelihood of accurate institutional assessment—and no doubt

¹¹¹ See, e.g., *O'Conner v. United States*, 269 F.2d 578, 584 (2d Cir. 1959) (ruling appellant entitled to have the life expectancy figure of 34.76 years used from a mortality table for white males instead of a figure of 36.4 years from a mortality table of the general populace, both male and female); *Byrd v. Trevino-Bermea*, 366 S.W.2d 632, 635 (Tex. Civ. App. 1963) (refusing to notice that Mexican citizens have a lower life expectancy than do those of the United States).

¹¹² Mortality tables do, after all, include all deaths, including compensable ones. Thus, a simplistic use of these tables would deprive the victim's estate of what it might have recovered from another tortfeasor.

there are still other issues¹¹³ that further complicate the valuation task. But why spend so much of society's scarce resources on a question that seems so unlikely to be well answered?

C. Toward Self-Assessment in Torts

1. Assessment By Insurance

The major challenge in designing a self-assessment system for property was to develop a mechanism that would keep owners from underassessing the internal value of their property.¹¹⁴ In the area of tort damages, the problem is one of overassessment. Essentially, each person determines, in advance of any injury, the amount that he would need to be compensated for a period of lost employment. Recall that for the present, this system is meant to deal with lost earning capacity—the most costly part of the conventional institutional assessment¹¹⁵—and not with the other components of tort damages such as pain and suffering. Each individual will know that his response to the request for self-assessment of lost earnings will determine the amount of his recovery in the event of a successful tort suit. If this self-assessment plan is to be workable, then, it must be designed to control overassessment.

The proposed self-assessment system for torts counters the ten-

¹¹³ One issue that can further complicate computation of awards is that of pretrial inflation. See generally Note, Pre-Assessment Inflation as a Factor in Damages, 48 U. Cin. L. Rev. 999 (1979) (arguing that economic fluctuations that alter the value of money during the time between measurement and assessment of damages are a factor in assessment that has been largely ignored in American law). Note that this preassessment, or pretrial, difficulty derives from the victorious plaintiff's inability to invest as yet unawarded recoveries during this period. See *supra* note 78 and accompanying text. The problem of accounting for environmental changes in the pre-assessment period arises in many assessment and self-assessment contexts and is largely passed over in this article. See *infra* note 192.

Another issue dealt with by the courts, but not discussed here, is recovery for loss of enjoyment of life, an item theoretically separable from damages for pain and suffering. See generally Comment, Loss of Enjoyment of Life—Should it be a Compensable Element of Personal Injury Damages?, 11 Wake Forest L. Rev. 459 (1975). From the perspective of self-assessment, the average person may not know which activities to insure, but people with special talents, such as musicians, or special capacities for enjoyment, for example in their work, surely would know their focal points before an injury. This area of damages is thus one especially suited to self-assessment.

¹¹⁴ Of course, if the prospect of a forced taking by the government, under its power of eminent domain, were much more likely and the property tax very low, then owners would tend to overassess and the design challenge would be quite different.

¹¹⁵ See *supra* note 54 and accompanying text.

dency toward overassessment by designating the *first-party insurance coverage of the injured party* as the self-assessed amount. Thus the self-assessor is required to demonstrate the accuracy of his valuation of damages in the event of a tort by spending premium dollars to provide for that amount of recovery in the event of a nontortious accident.¹¹⁶ A simple example will clarify this technique: Q has purchased insurance that pays him \$50,000 per year in the event of unemployment that results from an accident, such as a falling down his own basement staircase. Q pays \$ X for this insurance and continues paying these premiums for a number of years. During this period Q falls down R's stairs during a visit to R's home, and in the "first half" of a subsequent tort trial, R is found negligent and responsible for all the damage. To recuperate, Q will miss work for two years. The time-consuming and inaccurate "second half" of the trial now is avoided under the self-assessment system. R's insurance company¹¹⁷ will pay Q an amount equal to the present value of two years salary, at \$50,000 a year.

A number of features of this plan should be noted at the outset. The second half of the trial is not entirely eliminated. Expert testimony must still predict the length of Q's recuperation. If Q is still to be paid in lump-sum fashion, the discounting process also must be undertaken. Ideally, this process will utilize some low "real" rate of interest, such as two or three percent, because the time value of money remains after the inflationary component is removed from the current nominal interest rate.¹¹⁸ Beyond these matters, however, virtually every other issue that makes damage determination so difficult either disappears or diminishes in importance. The likelihood of promotion and changes in career path, for example, are no longer subjects for litigation. Q, the individual best able to predict his future earnings and needs, has already assessed these items, "announced" the amount of recovery needed for each year of lost employment, and planned ahead based on the knowledge of his expected recovery.

¹¹⁶ It is possible that a tortfeasor may be liable for injuries covered by the victim's insurance coverage. The problem of simultaneously preserving deterrence by retaining tort liability and avoiding double recoveries that overcompensate the victim is taken up below. See *infra* notes 140-50 and accompanying text.

¹¹⁷ Under subrogation, Q would be paid by his own insurer in the first instance. See *infra* notes 148-50 and accompanying text.

¹¹⁸ See *supra* note 80.

Although this self-assessment system avoids much of the second half of the tort trial and thus saves substantial administrative costs, some of these costs are merely transferred to the self-assessor. Just as the self-assessment system for property tax valuations sought to decrease administrative costs and increase accuracy by shifting the assessment task to the party most familiar with the property in question, the proposed tort system would require effort on the part of each self-assessor. The difficult questions that complicate institutional assessments do not disappear but are shifted to the individual who can, if he wishes, make a serious effort to predict his own future income and needs. The advantages of self-assessment derive in part from permitting the individual whose decisions, efforts, and tastes are at issue to answer some of the valuation questions, such as the direction of career paths and consumption patterns, and in part from removing unanswerable questions, such as interest rate trends, from the litigious atmosphere of the courtroom.¹¹⁹

A critical element of this self-assessment system is that the liability of the tortfeasor *R* is sensitive to the circumstances of the injured party *Q*. The greater *Q*'s earnings and needs, the greater will be *Q*'s self-assessment via purchased insurance coverage. The correspondence between the tortfeasor's liability and the magnitude of the loss that results from his tort is, of course, central to optimal deterrence and the minimization of accident costs.¹²⁰ The proposed self-assessment system seeks to ensure that a potential

¹¹⁹ Some determinants of damages, such as future career paths, taste for leisure, and special enjoyment of activities, *will* be easier for self-assessors to value. Other variables, such as fluctuations in interest rates, taxes, and inflationary trends, will be no easier for the average self-assessor than for the typical institutional assessor. With respect to these more difficult "non-idiosyncratic determinants," two points ought to be noted. First, self-assessment still will save administrative costs to the extent that it removes issues from the courtroom. Second, the confused self-assessor can still consult experts—much as the property tax self-assessor can turn to insurers—and acquire information that is likely to be superior to that developed in a courtroom. Of course, the self-assessor must avoid relying on false information. In this regard, the marketplace might be expected to sort out good counselors from bad at least as well as juries sort out good expert witnesses from vacuous mercenaries.

¹²⁰ See Demsetz, *When Does the Rule of Liability Matter?*, 1 J. Legal Stud. 13, 26-28 (1972) (noting that optimal deterrence follows from assigning the full costs of an accident to a party, although in the absence of transaction costs the identity of the liable party may not matter); Posner, *A Theory of Negligence*, 1 J. Legal Stud. 29, 46 (1972) ("For the Hand formula to optimize safety, the rules for determining damages once the defendant's liability has been established must measure with reasonable accuracy the social costs of accidents.").

tortfeasor (such as *R*, when caring for his property) will consider the real costs of his actions. The more certain it is that the tortfeasor will pay the true costs of those accidents that he does cause, the more he can be expected to act in a socially efficient manner. Self-assessment is designed to replicate the deterrence features of the conventional tort system. The first half of the trial is therefore retained while the second half continues to aim for full compensation of the tort victim.

2. *Self-Assessment and the Taxability of Recoveries*

Self-assessment may appear to undermine the deterrence effects of conventional tort rules. Traditionally, tort awards ignore the fact that had he not been injured and, instead, continued to earn money in the course of his employment, the injured party would have been taxed.¹²¹ Tort reparations like insurance recoveries are not taxed,¹²² however, and the traditional rule thus generally overcompensates the plaintiff. But from the perspective of the deterrence goal, this existing rule is quite sensible, because the tortfeasor should be confronted with the full cost of his actions in order to be optimally deterred. After all, society, through its tax collector, is now without the revenues it "expected." The fact that some of the injured party's earnings normally accrues to the government does not alter the reality that the tortfeasor's actions have cut off all of the victim's work effort as best measured by total earnings. To be sure, perhaps the government should share in the victim's recovery as compensation for its lost revenues. That it chooses not to tax tort recoveries does not change the amount of harm done by the tortfeasor nor, therefore, the amount of deterrence that is necessary.

Self-assessment seems to disturb this deterrence scheme because a self-assessor, such as *Q*, will adapt to the prevailing tax laws and self-assess at an amount less than his total taxable earnings. Society's interests will be unprotected because *Q* will only consider his own needs and not the portion of his work that would have inured to the government's benefit. *R*, in turn, will be underdeterred.

On the other hand, there are probably other workers who can be

¹²¹ See *supra* note 84.

¹²² I.R.C. § 104(a)(2)-(3) (1976).

hired to take *Q*'s place, or other means of modifying the production process, so that society does *not* lose the full amount of the victim's productive capacity. When *Q*, for example, misses work because of an injury, another worker or technique can be added or an existing input modified so that the real loss is much less than *Q*'s earnings. Thus, deterrence might be better served and the societal cost of an accident more accurately assigned if *R* is not made to pay the full amount of *Q*'s pre-tax earnings loss.¹²³ To the extent that compensation of *Q* is a distinct goal of the law, it may well be that *Q*'s after-tax earnings more closely approximate the societal loss than does his pre-tax income. Under self-assessment, potential victims are likely to self-assess at their after-tax earnings level, while the present system of conventional tort damages traditionally fixes awards based on victims' pre-tax earnings levels.

This is not to suggest that there is any necessary correspondence between the government's tax bite into *Q*'s earnings and the amount of *Q*'s loss upon injury that may be someone else's gain. Rather, the point is that to the extent that *Q*'s loss is another party's gain, there is no net societal loss, and the traditional rule of compensating *Q* for his economic loss at his full pre-tax earnings is likely to overdeter *R*. As such, a self-assessed system is not necessarily inferior to an institutionally assessed one when, as is likely, the self-assessor considers the non-taxability of a potential tort recovery. On the other hand, this feature of self-assessment that may make the amount of deterrence more nearly optimal is not one that requires the institution of self-assessment. After all, conventional assessors (juries) could be instructed to consider the after-tax position of the injured party.

This detour into the question of optimal deterrence and the taxability of tort recoveries demonstrates the sensitivity of self-assessment to various concerns in tort law. But this adaptability ought not to obscure the simplicity of self-assessment. By substituting the self-assessed amount of first-party insurance for the conventional assessment of the second half of a trial, self-assessment would save administrative costs, compensate victims adequately

¹²³ For a development of this theme along a different line, see W. Bishop, *Economic Loss* (1981) (unpublished paper on file in the University of Virginia Law Library) (dividing economic loss in tort into categories based on the generation of social loss rather than private loss and arguing that recovery for the latter should be denied).

and predictably, and retain or even improve the deterrence features of the current tort system.

3. *Self-Assessment Plus Scheduled Damages*

In its reliance on self-assessment through the use of insurance policy purchases, the simple system described above penalizes the uninformed and, possibly, the cash-poor individual. Some individuals may never learn about the opportunity for self-assessment and may appear to have self-assessed a zero amount. It would be possible to continue with institutional assessments for any such injured parties if the self-assessment is below some minimum amount. Such a rule also might be extended to protect the unfortunate party who has purchased a tiny amount of lost earnings insurance. But this approach is less than ideal. If a choice is offered between subscribing to the self-assessment innovation, by purchasing first-party insurance, and continuing with the second half of a trial, then there is a danger of "adverse selection."¹²⁴ For example, individuals who are presentable as particularly sympathetic plaintiffs may seek to avoid self-assessment altogether. Moreover, given the administrative costs and inaccuracies that inhere in institutional assessments, it is desirable to design a self-assessment system that entirely removes damage determination from the courtroom.

It is suggested, therefore, that in the absence of a self-assessed damage amount, the system rely on an announced *schedule of damages* similar to that used in Workmen's Compensation systems.¹²⁵ This schedule might set an amount such as \$15,000 per year as the "statutory amount" for determining the earnings component of tort damages. Thus, if in a suit against *R*, *Q* is unable to produce evidence of a prior self-assessment, the court would award \$15,000 for each of the two years of recuperation and discount appropriately. If *Q* is expected to miss but a few days of work, then the statutory amount would be pro-rated.

¹²⁴ See generally Pauly, *Overinsurance and Public Provision of Insurance: The Roles of Moral Hazard and Adverse Selection*, 88 Q.J. Econ. 44 (1974).

¹²⁵ See, e.g., Federal Employees Compensation Act of 1966, 5 U.S.C. §§ 8101-93 (1976); Longshoremen's and Harbor Workers' Compensation Act of 1927, 33 U.S.C. §§ 901-50 (1976); N.Y. Workmen's Compensation Law §§ 15-16 (McKinney 1964). See also A. Millus & W. Gentile, *Workers' Compensation Law and Insurance* 155-205 (1976) (discussing benefits under the New York Workmen's Compensation Law).

The suggested statutory amount is, of course, arbitrary. The \$15,000 amount may, in fact, seem far too generous a minimum, considering its nontaxability to *Q*. On the other hand, this high minimum guarantee may serve as a concrete display of the administrative cost savings that are available in the absence of institutionalized assessments. A generous statutory amount is also indicated by the plight of an injured party who has had little chance to self-assess. For example, the tort victim who recently has disembarked in the jurisdiction or country¹²⁶ would at least recover the statutory amount.

The award of this statutory amount is not, of course, part of a no-fault system but only follows a determination of the tortfeasor's liability in the first half of the trial. The deterrence function of the tort system thus is preserved. Theoretically, deterrence regards potential tortfeasors as sensitive and responsive to cost-benefit calculations. From this perspective, it would be desirable for the statutory amount to equal the average lost-earning capacity of the population that does not self-assess minus the pure wealth transfer component.¹²⁷ That is, tortfeasors might be as well deterred as they are in the conventional tort system by a self-assessed system in which the tortfeasor is required to pay either the victim's self-assessed amount or, for those victims who do not self-assess, the average loss for the group of uninsured potential victims.¹²⁸ There

¹²⁶ The system also could allow residents of jurisdictions with no self-assessment system to introduce evidence of insurance policies held in their resident state or country. Thus, nonresidents need not be excluded from self-assessment.

Alternatively, the system could lower the statutory amount for non-assessing residents to conform to their average lost earnings and offer a higher statutory amount for nonresidents to match their average damages. The latter group's average is likely to be higher because it includes individuals with relatively high earning capacities who would have self-assessed had they been residents.

¹²⁷ See *supra* note 123.

¹²⁸ In other words, potential tortfeasors are deterred not by the actual costs in their individual cases, but rather by the expected costs of probabilistic outcomes viewed prospectively. The scheduled damages therefore can be adjusted to match the deterrence effect of the traditional tort system. Assume, for example, that 50% of the pedestrian population is entitled to \$40,000 per year for lost earning capacity, 25% to \$20,000, and 25% to \$6,000. In the traditional tort system, the tortfeasor who injures a pedestrian can expect to pay \$26,500, assuming a one year recuperation period. That is, $0.5 \times (\$40,000) + 0.25 \times (\$20,000) + 0.25 \times (\$6,000) = \$26,500$. A self-assessed system that covers the same population can offer the same amount of deterrence. If only the \$40,000 earners self-assess, then the statutory amount ought to be set at \$13,000 and the tortfeasor will expect to pay $0.5 \times (40,000) + 0.5 \times (\$13,000) = \$26,500$. If, on average, one half of the \$20,000 earners decide

is some danger, then, that if the statutory amount is greater than the average earning capacity of the uninsured and unassessed population, potential tortfeasors will be overdeterred. On the other hand, any statutory amount that is much lower than \$15,000 is likely to generate opposition to self-assessment for tort damages. Despite the tension it engenders between adequacy of award and overdeterrence, the proposed system can be regarded as second best because it seeks to avoid the expenses of institutional assessments, does not underdeter tortfeasors, and is generous enough to meet the criticism that it is inequitable to the uninsured and uninformed.

A second objection to overgenerous scheduled damages concerns the problem of moral hazard, or more specifically, malingering. If an injured party can expect to be financially better off while recuperating than while working, there is a danger that the recuperation period will be self-extended. Even more malingering can be expected if the injured person is not satisfied by his work. To the extent that the damage award is determined before the opportunity to malingering arises, and is then paid in lump sum fashion, there is no incentive to malingering because the injured party's finances can only be improved by his returning to work. Court calendars, however, are such that there is a pre-trial period and, therefore, a real moral hazard. Although malingering is a problem associated with virtually all tort and insurance systems, generous statutory amounts may exacerbate the hazard.¹²⁹ Furthermore, if the statu-

to spend premium dollars and self-assess, then the statutory amount ought to be set at \$10,667. The tortfeasor will expect to pay $0.5 \times (40,000) + 0.125 \times (\$20,000) + 0.375 \times (\$10,667) = \$26,500$. In sum, we can alter the statutory amount—to protect the deterrence feature of tort law—as the average income of the uninsured, i.e., not self-assessed, population changes.

¹²⁹ Malingering presents a particularly acute problem in the context of partial employment loss, where the injured party is able to work but only at a less strenuous job than the one he held before his injury. The victim may prefer to insist on his total disability rather than undertake rehabilitation that leads to such partial re-employment. The insurance and tort systems probably should allow the victim to recover the full amount of his employment loss (and assume no partial employment), but have the insurance contract provide 50 cents of recovery for each dollar that is earned after rehabilitation. This would avoid the disincentive created by the current rule by withholding a dollar of insurance for each dollar earned. See *supra* note 74 and accompanying text.

In the traditional tort system, such an antimalingering technique would lead to the overdeterrence of potential tortfeasors, because the ability of the plaintiff to work—albeit at a new job—would no longer be a defense that would mitigate damages. Yet if this rule is

tory amount is too generous, a different moral hazard results, because some people may take too many risks and tend to be involved in more accidents.¹³⁰

It is interesting to note that the substantive rules in the trial's first half may affect the behavior of potential malingerers. An injured party who faces a tort trial in the foreseeable future will be less inclined to mangle, the lower the probability of victory on the issue of liability. After all, if the defendant is frequently freed from liability, the plaintiff will not risk unnecessary medical expenses and periods of unemployment. Other things being equal then, a rule of liability that hinges on negligence may be superior to a rule of strict liability¹³¹ to the extent that plaintiffs are more assured of winning under the latter rule. Of course, other things are not equal, and a legal rule that requires a determination of negligence or relative negligence is apt to consume more resources in the first half of each trial than is one that assigns liability more strictly. Still, the point is that malingering may be exacerbated by the certainty of liability.

It could be argued that because deterrence depends on the tortfeasor's average or expected payout in the event of injury, self-assessment is unnecessary and scheduled damages should serve as the *sole* determinant of compensation. If the statutory amount can be set at the level that corresponds to the average earnings of the *entire* population, then tortfeasors can be optimally deterred and the costs of institutional assessments avoided without resort to a system of self-assessment. The administrative costs associated with the additional purchases of first-party insurance, generated by self-assessment, would also be saved. Yet a system that preserves the self-assessment option is plainly superior to this suggestion. To the extent that compensation is a goal of the tort system, self-assessment allows individuals who foresee the inadequacy of the scheduled amount in the event of their own injury to be compensated fully. Put in a more political way, the proposed system of self-assessment is meant to save administrative costs and leave ev-

applied in a self-assessment system, potential victims will underassess, because they will count on 150% recoveries if they receive both insurance and wage funds. As a result, the deterrence level may be nearly optimal.

¹³⁰ The same moral hazard is present in the choice of a rule governing collateral sources in tort recovery. See *infra* notes 140-50 and accompanying text.

¹³¹ See generally Demsetz, *supra* note 120, at 13; Posner, *supra* note 120, at 29.

everyone at least as well off as under the conventional system. To many people the statutory amount will appear generous. To those who view the schedule as inadequate, self-assessment is available.

Finally, it might be argued that the statutory amount ought to be more generous, despite the problems of overdeterrence and malingering. This is because some potential victims would honestly self-assess at a level above the statutory amount but might not be able to do so because they cannot afford the necessary premiums. Although these troubling cases may persist, insurance companies have incentives to correct these underassessment problems, which stem from imperfections in the capital market. Much as credit cards are now offered to cash-poor students, an insurance company might offer to sell first-party lost-earnings insurance—with a marketing reminder that the amount of such insurance can serve as the determinant of damages in the event of a third-party liability—for premiums that are largely payable, with interest, in later years.

4. *Self-Assessment in Wrongful Death Actions*

The use of self-assessed damages in wrongful death suits is perhaps the simplest and most convincing of all the applications of the self-assessment principle to tort law. The emphasis on lost earning capacity as a model for self-assessment largely derives from the enormous difficulty of assessing this capacity institutionally. The accuracy of self-assessment—as opposed to its cost-saving feature—is most impressive, however, when use is made of the link between recovery for a fatal accident and the *amount of life-insurance coverage* previously purchased on the deceased victim's life. If *R*'s tortious act kills *Q*, then the self-assessment principle can avoid the pitfalls of calculating lost earning capacity, consumption tendencies, and other necessary components of an institutional assessment. In fact, the process of discounting to present value can be avoided because *Q* purchased his life insurance with the knowledge that its benefits would be paid in a lump sum. Thus, the life insurance owned by *Q*'s family¹³² is a remarkably

¹³² There is room for debate about *which* life insurance policies ought to be used in the self-assessment process. The discussion in the text assumes that the family unit is an intimate and amicable one so that policies held by *Q*'s family on the life of *Q* can be summed (if more than one policy exists) to yield the appropriate tort recovery for *Q*'s survivors. Insura-

appropriate proxy for assessing *R*'s liability to those who suffer loss from *Q*'s death. This is especially true because life insurance is widely and aggressively marketed. The methods that are used for calculating the amount of life insurance coverage needed by a family are, of course, no more than methods of self-assessment. If *Q* or *Q*'s family did not purchase life insurance or purchased only a small amount of such protection, the system would again provide for a statutory amount.¹³³

If self-assessment is extended beyond lost earnings to include wrongful death actions or other components of tort damages, the scheme is complicated by the need for a "priority system." Consider, for example, the case in which *R* pushes *T* down the stairs and *T* is killed. *T* was 45 years old and worked in an industry with a mandatory retirement age of 65. There is no necessary reason why *T*'s life insurance coverage should match the discounted present value of his first-party lost-earnings insurance extrapolated over the twenty-year period of lost employment. Thus, if *T* carried a large amount of lost-earnings insurance, the amount over twenty years (properly discounted) may greatly exceed either the amount of *T*'s life insurance or the statutory amount of life insurance if *T* owns no qualifying life insurance. *T*'s survivors will insist that they should be left at least as well off as they would have been if *R*'s action had merely deprived *T* of twenty working years. With dif-

ble interests, however, do not always coincide with rights to recover for wrongful death. For example, a corporation may purchase "key man life insurance" to protect itself against the extraordinary costs it would encounter were a key executive to die. (Although it may also encounter these costs if the executive retires, the obvious moral hazard normally precludes the sale of such all-inclusive retirement insurance.) Yet it is unlikely that the corporation could recover from a tortfeasor who caused the death of this executive. This issue does not detract from the usefulness of self-assessment and can be settled, in large part, by legislative action.

There is also the question of whether "term" or "ordinary" life insurance provides the best self-assessment proxy. The latter carries with it more administrative costs, but because it incorporates a savings feature, ordinary life insurance may reflect more accurately the anticipated needs of the insured's family.

¹³³ The notion of a limitation on damages for wrongful death is not, of course, a novel one. See generally Speiser, *supra* note 108, §§ 7:1-7:6. Note, however, that the statutory amount in a self-assessment system—unlike its present counterpart—is not merely a limitation, but a fixed amount. Of course, a very low ceiling on damages as currently assessed may be one that virtually every plaintiff can prove and might, therefore, be the equivalent of a fixed statutory amount. In both systems, the scheduled limitations often will lead to settlements somewhat below the indicated amounts, because parties will consider the costs of litigation.

ferent facts, of course, the family can be expected to point to the amount of life insurance coverage as the proper self-assessed value.

As a practical matter, the amount of life insurance is likely to be a better assessment than the amount derived from the lost-earnings coverage. The latter may be higher because it was purchased with the assumption that *T*'s own consumption needs would have to be financed out of the recovery. It must be clear in advance, however, which of a variety of self-assessments or statutory amounts will prevail in the determination of damages. For the reason just discussed—and because life insurance is so widely marketed—it is proposed that in the event of death, self-assessment depend on the amount of life insurance coverage or, in the absence of such insurance, the statutory amount of life insurance.

5. *Tendencies Toward Overassessment*

There may be a bias toward overassessment inherent in the choice of first-party insurance as the proxy for self-assessment. Such a bias would, among other things, lead to an overdeterrence of potential tortfeasors because recoveries would exceed actual losses. Each dollar that is used to pay a first-party insurance premium buys not only some first-party insurance to cover accidental injuries to *Q*, but also an equivalent amount of potential tort recovery. Yet, this tort recovery will actually be borne not by the insurer, but by a tortfeasor, so that the premium charged by the insurer will be “low” in the sense that it will not include the likelihood of compensable tortious acts. Essentially, the insured buys two elements of coverage, but the insurer need only plan to pay one of those elements in setting its premiums. Therefore, the self-assessing insured party might purchase more first-party insurance than he would have in the absence of a self-assessment system.

Fortunately, this tendency toward overassessment is counteracted by two factors. Insurance premiums must cover not only the expected value of recoveries but also the administrative costs and profit margins of insurance companies. Because these costs are substantial, the insured tends in the first instance to purchase less first-party insurance than he really judges to be his need. As long as these administrative costs are not trivial, the dangers of overassessment within a self-assessment system are not worrisome. In addition, because the number of injuries that lead to recoveries from tortfeasors is relatively small compared to the number of injuries

covered by first-party insurance,¹³⁴ self-assessors would have to pay high premiums (that cover administrative costs) to gain a small expected value in potential tort recoveries.

Another danger of overassessment derives from the moral hazard that can be generated by insurance. Because it "takes two to tort,"¹³⁵ and liability rules imperfectly reflect the principle of comparative negligence,¹³⁶ there may be a danger that some people will overassess, hoping to prosper from an injury. Even if comparative negligence rules are brilliantly structured, there may be a tendency toward the moral hazard of increased involvement in accidents by individuals who hope to collect on a grand scale from multiple post-accident recoveries. Fortunately, the insurance market itself can be expected to deal with this problem. The graver the moral hazard the more likely that insurers will not sell insurance to applicants who seek to purchase amounts of insurance that far exceed their present or expected earnings. This ability of insurers to refuse to sell first-party insurance at first appears to defeat the goal of self-assessment. As seen earlier, an honest self-assessor may need compensation beyond the amount of his current earnings. Insurers, however, are perfectly able to compete for this honest self-assessor's business while remaining alert to the dangers of "optimistic" self-assessors when a substantial moral hazard is posed. It ought to be noted that, at the present time, some first-party lost-earnings insurance—in the event of hospitalization, for example—is offered regardless of the applicant's actual earnings.¹³⁷

The ability of the insurance market to protect against moral hazards and the importance of premium costs to counterbalance overassessment tendencies raise the nasty problem of the use of low-cost insurance as a quick self-assessment device. Although it is

¹³⁴ In addition to the fact that some injuries are self-inflicted or result from acts of God, some tortfeasors are judgment proof or unidentifiable. For some evidence of the extent of unrecoverable losses, see J. O'Connell, *The Lawsuit Lottery* 176-78 (1979), and sources cited therein.

¹³⁵ See generally Coase, *The Problem of Social Cost*, 3 J.L. & Econ. 1 (1960). Of course, one can be injured in the absence of a tortfeasor so that, in general, a moral hazard exists in the presence of insurance. This moral hazard, however, is unrelated to the present proposal for the tort system and therefore is left to the insurance literature.

¹³⁶ See R. Posner, *supra* note 57, § 6.3 (noting that the doctrine of contributory negligence often leads to suboptimal deterrence and that in some cases comparative negligence also is not the correct economic standard).

¹³⁷ Small amounts of such insurance are regularly advertised in the mass media.

true that, in general, premium costs and the discretion of the insurer will assure the reliability of first-party coverage as a proxy for self-assessed damages, there are some types of insurance that can be purchased at very low cost and for very high amounts of coverage. For example, an insurer may be willing to sell a sizable flight insurance policy at a premium cost of a few dollars because, although it has no opportunity to investigate *S*'s earnings, needs, or past, the moral hazard is low. The insurer can pool the risks that are posed by thousands of airplane trips and be confident that few of its customers are interested in killing themselves and fellow passengers in order to leave their beneficiaries with a handsome sum. Moreover, airline security devices, such as bomb detectors, will help eliminate most of the moral hazard generated by the willingness to "overinsure."

If a self-assessment system regards flight insurance as a generally applicable self-assessed amount, however, *S*'s recovery is not limited to airline mishaps. *S* could conceivably purchase flight insurance and then drive a bit more recklessly or take up scuba diving and hang gliding while on his vacation. In short, if *S*'s survivors can point to inexpensive flight insurance as a proxy for wrongful death, there will be an increased moral-hazard problem and a substantial tendency toward overassessment. This overassessment tendency is also present in situations unaccompanied by moral hazard. For example, a patient about to undergo surgery that presents a substantial chance of a malpractice suit may be encouraged by the self-assessment system to purchase some short-term life insurance or lost-earnings insurance, to the extent that insurers will sell the latter type of policy. In sum, the tendency toward overassessment is problematic when self-assessment at a high level is available at a low cost.¹³⁸

It is necessary, then, to modify the self-assessment system that has been described and only accept self-assessments that were obtained at some minimum cost or that covered some minimum period of time. For example, the statutory amount would apply unless first-party insurance for a larger amount had been in effect for more than one year, or unless unrefundable premiums of more than \$100 had been paid. The details of this modification remain

¹³⁸ An overgenerous statutory amount presents problems of a similar nature. See *supra* note 129 and accompanying text.

to be worked out and adjusted, but the general need for such a protective device is clear.¹³⁹

D. Self-Assessment and the Collateral Source Rule

The role of the insurer within the self-assessment system thus far has been a passive one. The insurer happens to sell the first-party lost-earnings or life insurance that provides the opportunity for bounded self-assessment. Although this subsection will propose that the insurer play a somewhat more active role in the system, this modification is not a necessary one. As an illustration, if the insurer pays *Q* when *Q* falls down his own stairs and *R* pays *Q* the same amount when *R* is found liable for pushing *Q* down the stairs, the system operates as promised; administrative costs are saved and deterrence features are preserved, if not improved.

The relationships among the tortfeasor *R*, the insured injured party *Q*, and the insurer are somewhat uneasy in this "pure" system, and depend on whether the jurisdiction subscribes to the collateral source rule. If it does, then the victim's insurance coverage normally will not affect the amount of his recovery.¹⁴⁰ *Q* will collect from the insurer alone when he falls down his own stairs and from both *R* and the insurer when *R* is found liable for *Q*'s fall. Commentators argue that *Q*'s "double recovery" is justified because *Q* has been paying premiums all along and therefore is independently entitled to the insurance recovery that is now available.¹⁴¹ This ra-

¹³⁹ One simple solution to the problem of inexpensive overassessment might be to require state insurance administrators to approve policies in advance of their being marketed for their self-assessment feature. Courts, in determining damages, could consider unapproved policies, but only those similar in character to approved policies would be presumptively applicable. Other questions requiring interpretive rulemaking could be referred by statute to these administrators.

¹⁴⁰ See Procaccia, *The Effect and Validity of Subrogation Clauses in Insurance Policies*, 609 Ins. L.J. 573 (1973) (noting that although subrogation is not permitted in personal injury insurance contracts, except by express contractual provision, in life insurance policies the anti-subrogation result may not be changed even by express agreement). See also Maxwell, *The Collateral Source Rule in the American Law of Damages*, 46 Minn. L. Rev. 669 (1961-62); West, *The Collateral Source Rule Sans Subrogation: A Plaintiff's Windfall*, 16 Okla. L. Rev. 395 (1963).

¹⁴¹ See R. Posner, *supra* note 57, § 6.15 (noting that premiums reflect the discounted cost of injuries plus the cost of policy writing so that the insured should receive double recovery); Conard, *The Economic Treatment of Automobile Injuries*, 63 Mich. L. Rev. 279, 313 (1964) (arguing that private life insurance benefits, a large portion of which is a return of savings, ordinarily should not be deducted from tort damages); James, *Social Insurance and Tort*

tionalization, however, ignores the sensitivity of insurance rates: if the collateral source rule were abandoned, premiums would decrease because the insurer would not need to dip into its own funds when a tortfeasor is capable of paying the recovery.

There are compelling justifications for permitting the injured party to collect from the tortfeasor despite the availability of any insurance recovery. The tortfeasor should not be absolved from paying for the harm he has caused merely because an injured party has purchased insurance, either directly with premiums or indirectly by accepting lower wages in exchange for employee coverage. In deterrence terms, the argument in favor of always extracting full payment from the tortfeasor is the same as that discussed earlier in the context of requiring the tortfeasor to pay the pre-tax earnings of the injured party.¹⁴² A potential tortfeasor must face the full cost of the harm he may cause in order to be optimally deterred. If, instead, the goals of the tort system are optimal deterrence *and* full compensation, they can be accomplished without forcing the tortfeasor to pay the full cost of the injuries he causes. Assuming the victim's insurance provides him full compensation, the tortfeasor could be required to pay an equivalent amount into a public fund. Similarly, if the goal of the tort system is optimal deterrence—and full compensation is unimportant—then negligent actors could be fined an amount equal to the expected damage from each negligent act, regardless of whether anyone was actually injured.¹⁴³ Assume, however, that full compensation of tort victims is a desirable goal and that administrative costs are saved by avoiding the institution of government-managed pools and fines. Thus, the system should involve only the tortfeasor, injured party, and insurer.

A choice must be made, then, between the collateral source rule, under which both *R* and the insurer will pay *Q*, and a system in which *R* pays but the insurer does not. In the convenient terminology of Professor Conard,¹⁴⁴ this article has rejected a "deduction" approach, in which the tortfeasor would be freed from paying to

Liability: The Problem of Alternative Remedies, 27 N.Y.U. L. Rev. 537, 553 (1952) (noting that the claimant's own thrift and foresight are justifications for allowing double recoveries).

¹⁴² See *supra* notes 121-23 and accompanying text.

¹⁴³ For the statement of this argument in the context of criminal deterrence, see Stigler, The Optimum Enforcement of Laws, 78 J. Pol. Econ. 526 (1970).

¹⁴⁴ Conard, *supra* note 141, at 279.

the extent that reparation is available from another source (the insurer), because it interferes with the deterrence goal of tort law. Three other avenues are available. One is cumulation, in which insurers and tortfeasors pay their due without regard to the possibility of double recovery. A second is subrogation, which permits one source of compensation, typically the insurer, to seek reimbursement by pursuing the insured's tort claim. The third approach, deduction, runs in the other direction¹⁴⁵ by freeing the insurer from paying whenever the injured party, its insured, can collect from a tortfeasor. This "deduction-by-insurer" system is a fair description of the simplest self-assessment system described earlier.

1. *Deduction by the Insurer*

Although the deduction-by-insurer alternative preserves deterrence by requiring the tortfeasor to pay for the results of his actions, such an approach is somewhat awkward. In terms of the earlier illustration, if *Q* falls down his stairs, the insurer will compensate him; but if *R* pushes *Q* and is found liable in the first half of a tort trial, *R* will pay *Q* and the insurer will not. Can *Q* be expected to manage the lawsuit against *R* effectively? If *Q* loses the suit against *R*, *Q* will merely collect from the insurer. In fact, any expenditure by *Q* for legal fees will probably come out of his recovery from *R*, so that *Q* may actually prefer to lose the lawsuit! The insurer might contractually require *Q* to pursue his tort claim with vigor, but this would require a good deal of policing and would generate litigation with all its attendant administrative costs.

The insurer could try to design its policies to exclude accidents that require the insured's assistance in litigation. For example, the insurance might cover only "first-party accidents" in which the insured—and no other party—was involved. Such a narrow policy could still serve as a self-assessment device¹⁴⁶ but it would leave an

¹⁴⁵ Although Conard discusses and favors an approach in which tortfeasors may deduct insurance proceeds, excluding most private insurance, *id.* at 312-14, he fails to recognize the possibility of allowing the insurer to deduct damages recovered from a tortfeasor. Of course, an injured party would prefer the subrogation approach, or, if faced only with the choice of deduction schemes, deduction by tortfeasor, because the insurance recovery will normally be available soon after the accident, rather than after a delayed trial.

¹⁴⁶ Subject, however, to a minimum premium requirement or similar device that avoids the moral hazard associated with large amounts of coverage at low cost. See *supra* note 138

injured party uncompensated in many cases. To the extent that compensation is a goal of the tort system and a typical buyer of insurance seeks an assurance of compensation, this narrow policy design would be undesirable. It is difficult to imagine any device that would encourage an insured party to pursue a claim against a tortfeasor (who will then be optimally deterred) and yet ensure that the claimant will always be compensated with no double recovery.

2. *Cumulation*

The tension between insured and insurer that mars the deduction-by-insurer approach to parallel recoveries is not present in a system of cumulation. Cumulation, however, which retains the collateral source rule, creates planning difficulties for the individual who contemplates purchasing insurance, increases the moral hazard, and, in the context of self-assessment, lessens deterrence. Planning difficulties derive from the "game" that will be played by an individual who can only guess whether an accident that may befall him will involve the tortious and compensable act of another party. *Q*, for example, may self-assess his need for income during recuperation at \$50,000 per year. Because *Q* may fall down his own stairs, he is inclined to purchase this \$50,000 amount of insurance coverage. If, however, he expects this injury to result from *R*'s push, under cumulation he can recover some amount from *R* as damages. Under these circumstances, *Q* will be inclined to save some premium money and insure himself against lost earnings for less than \$50,000. *Q*'s precise calculation will depend on the expected probability of receiving a "recoverable" injury from a tortfeasor and on his attitude toward risk. Most people who buy insurance are interested in protection, however, and not in risky calculations or windfalls. Thus, a disadvantage of cumulation and the collateral source rule is that the decision to buy insurance is complicated by the prospects of double recoveries.

Although this planning problem might not appear to be a serious one, it will occur more often under a self-assessed damage system. The use of first-party insurance as the proxy for valuation may lead many people who have not purchased insurance in the past to

and accompanying text.

do so if this insurance is the only way to recover more than the statutory amount in the event of a tortious injury. Many of these new insureds will be even less inclined to gamble and thus more interested in predictable recoveries.

More important, the prospect of double recovery will trigger the moral hazards discussed earlier.¹⁴⁷ Some individuals will tend toward riskier behavior so that more accidents can be expected. There is also the post-accident moral hazard of malingering to consider. Each day of unemployment may produce a recovery that is double that of the individual's compensation for work. Note, however, that these hazards of cumulation are unrelated to the adoption of self-assessment and are merely byproducts of the collateral source rule.

Finally, cumulation and the collateral source rule interfere with the ability of a self-assessed damage system to deter accidents and tortious acts optimally. Imagine that *Q* predicts that he is as likely to fall down as to be pushed down the stairs. In the event of a fall, *Q* wants \$50,000 of insurance coverage. If pushed, he needs only \$25,000 in insurance coverage because under the collateral source rule he can collect the remaining \$25,000 from the tortfeasor, after pointing to his self-assessed amount. Given *Q*'s prediction, and ignoring nonneutral risk preferences, *Q* may well purchase \$33,333 of insurance coverage. When *Q* falls, he will collect \$33,333, and when pushed, \$66,666, so that on average he will still collect his goal of \$50,000. Yet *R* will now be underdeterred because his liability will match *Q*'s self-assessed amount of \$33,333 although he causes \$50,000 of harm. Plainly, as *Q* underassesses in response to cumulation, *R* is underdeterred.

3. Subrogation

Subrogation overcomes the weaknesses of the cumulation and deduction approaches to overlapping recoveries. Subrogation always permits the insured party to collect from his insurer and the insurer can, in turn, collect from the tortfeasor. Some insurance contracts already provide for subrogation, and this practice is not considered contrary to public policy.¹⁴⁸ The self-assessment propo-

¹⁴⁷ See *supra* notes 129-30, 135-38 and accompanying text.

¹⁴⁸ See generally R. Keeton, *supra* note 63, § 3.10 (noting that property insurance policies commonly include subrogation clauses but that life and accident policies do not). See also

sal would require subrogation for all insurance contracts that could be used for self-assessment. Planning would be straightforward because double recoveries would be eliminated. Deterrence would be well served because an insured would not be inclined to underassess.

Conceptually, if subrogation is adopted, the insurance company can be regarded as an insurer for nontortious injuries and as a conduit and collector in recoveries from tortfeasors. From a compensation perspective, this aspect of the system is desirable because the injured party will recover soon after the accident. Moreover, if the tortfeasor carries liability insurance, subrogation may reduce administrative costs because insurance companies are experienced negotiators capable of disposing of claims between one another rapidly.¹⁴⁹ Similarly, subrogation responds in part to the plight of an injured party who is often in great need of cash and apt to be pressured into an unfavorable settlement.¹⁵⁰

In a system without subrogation, the injured party must bargain directly with the tortfeasor or his insurer, either one of whom can begin the bargaining with an insistence on no liability at all even if the injury is undisputed. By contrast, under the proposed system, the injured party deals with his own insurer. Although he is still subject to negotiating pressure—concerning the expected length of the recuperation period, for example—there is less room for disagreement.

E. Extensions to Other Components of Tort Damages

Although the basic self-assessment system is a desirable substitute for conventional damages determinations in suits involving loss of life or earning capacity, it cannot be extended uncritically

Note, Insurance Subrogation in Personal Injury Torts, 39 Ohio St. L.J. 621 (1978) (commenting upon expansion of the permissible scope of subrogation to include medical payments under an automobile insurance policy).

Subrogation, like the cumulation and deduction schemes, presents post-accident moral hazards. A comparison of these hazards, however, is left to another effort. This article emphasizes only that, among the obvious alternatives to cumulation, subrogation is relatively attractive for the purposes of the self-assessment proposal.

¹⁴⁹ For a statement of this argument in the context of social insurance and tort liability in general, see James, *supra* note 141, at 561 (arguing that subrogation between enterprises often will cancel out in the long run).

¹⁵⁰ See generally H. Ross, *Settled Out of Court* 140 (1980).

to other areas of tort damages. Tort law permits recovery for losses resulting from medical expenses, nonphysical harms (such as injury to reputation), pain and suffering, and property damage. The following discussion considers whether self-assessment can be extended to these areas.

1. *Medical Expenses*

Self-assessment has little or no role to play in the determination of compensable medical expenses. Typically, these expenses either have been incurred or can be easily predicted at the time of trial. Even in cases where the severity of injuries is difficult to predict until well after the trial has ended, there is no reason to expect these costs to be susceptible to self-assessment. Self-assessment makes sense, recall, when losses depend on personal factors more accurately evaluated by the intimately involved individual than by strangers entrusted with the process of institutional assessment. The expense of proper medical treatment does not depend on personal tastes or aspirations.¹⁵¹ As such, the determination of this component of tort damages should be left to conventional assessment by judges and juries, aided by expert testimony. If there is room for improvement in this area, it is in removing this determination from the package that is included in the lump sum award that the tortfeasor pays after trial and, instead, guaranteeing these payments to some extent by paying the injured party over time, as the medical expenses are incurred.¹⁵²

2. *Nonphysical Torts*

Self-assessment similarly offers little promise for damage that results from injuries to reputation, invasions of privacy, emotional harm, and other nonphysical torts. More often than not, the identity of the tortfeasor, location of the tortious act, or circumstances surrounding the injury will determine the extent of the harm. Al-

¹⁵¹ Of course, some individuals will value an expensive private hospital room more than the average person; in other words, idiosyncratic tastes are not absent in the field of medicine. Furthermore, there are certainly those who know that their own medical histories predict a more-expensive-than-average recovery. As a gross generalization, however, it is fair to conclude that medical expenses are routinely and uniformly assessed in tort trials today, so that self-assessment can work little improvement in this area.

¹⁵² See *supra* note 74.

though these harms are related to personal tastes, unlike medical needs, potential victims are unlikely to be able to specify in advance the variety of potential injuries and the internal valuation of their resulting damages. Moreover, even if an individual can predict the nature of a nonphysical tort and self-assess the value of the interest that might be violated, insurers will shy away from providing the coverage that serves as the proxy for self-assessment because of the substantial moral hazard involved. For example, self-assessment may appear quite appropriate for the damage caused by a tortious disclosure of an embarrassing fact, and institutional assessment of damages is likely to be quite speculative. Nonetheless, an insurer can hardly offer coverage to the potential victim. Apart from the guesswork involved in setting premiums, it is difficult for the insurer to know whether the "fact" is really embarrassing to the insured. If it is not, the insured easily can arrange for the fact to be divulged in order to obtain a tax-free insurance recovery. Thus, the potential for self-assessment for nonphysical torts is, at best, limited and can be safely put aside.

3. *Pain and Suffering*

The proper treatment of losses from pain and suffering under a self-assessment system is problematic. Consider the case of *U*, a teacher, who loses a limb while using a product defectively manufactured by *V*. *U*'s medical expenses, including the costs of post-operative care, are relatively simple to calculate and will be paid by *V*.¹⁵³ If *U*'s injury does not interfere with his teaching career and the recuperation period is short or coincides with a vacation, *V*'s liability will be quite small.

Conventional assessments avoid this result by considering "pain and suffering" as a component of plaintiff's damages to be monetized. Self-assessment could be limited to the uses already described and juries could still be asked to attach a value to pain and suffering in the second half of a tort trial. Unlike lost earning ca-

¹⁵³ Note that if *U* also carries first-party health insurance, there will be the question of a double recovery and the status of the collateral source rule. Since medical expenses are not to be determined by self-assessment, the deterrence of *V* is not affected by the amount of *U*'s insurance—but considerations of planning simplicity and moral hazard still indicate the superiority of subrogation over cumulation. See *supra* text accompanying note 147. Note, however, that this choice of approaches is not related to the self-assessment system and therefore may be passed over.

capacity, for example, it can hardly be argued that pain and suffering is more accurately assessed by a victim *beforehand* than by an impartial assessor, such as a jury, after the injury. It would be hopeless to expect honest self-assessment after the injury, although the potential for accuracy is then present.

On the other hand, conventional jury assessments of pain and suffering are highly speculative and of dubious consistency and accuracy. These flaws undermine the goals of optimal deterrence and fair compensation. Moreover, there are substantial costs involved in these speculative assessments because juries must listen to witnesses and deliberate. It may be appropriate, then, to refuse to compensate a victim's pain and suffering. Predictably, self-assessors will add to their assessments of lost earning capacity an amount meant to cover the expected pain and suffering from an injury of given severity. After all, pain and suffering will normally be correlated with the length of recuperation and unemployment. This approach is similar to proposed no-fault systems in which the injured party collects only from his own insurer. Because the goal of no-fault is to avoid litigation, pain and suffering are ignored or considered to be included in medical expenses or other easily monetized components of compensation.¹⁵⁴

This "wishing away" of pain and suffering may be perfectly acceptable in return for a system that promises lower administrative costs and surer compensation. Indeed, self-assessment, like no-fault, can deal with particularly outrageous cases, such as the teacher's loss of a limb but no work time, by removing them from the proposed system and allowing conventional assessment to continue.¹⁵⁵ The system, however, can save additional administrative

¹⁵⁴ Keeton and O'Connell conclude that: (1) The basic, compulsory no-fault coverage should not include compensation for pain and suffering; (2) Individuals should be free to buy such coverage from insurers; (3) In less serious injuries, despite the lack of coverage by the basic plan, injured parties should be unable to sue for their pain and suffering; and (4) Traditional tort suits should continue for the more severe cases so that awards for pain and suffering as well as for economic loss will continue. See R. Keeton & J. O'Connell, *supra* note 52, at 360-61. See also Calabresi, *The New York Plan: A Free Choice Modification*, 71 *Colum. L. Rev.* 267, 268 n.6 (1971) (noting the impracticality of scheduled damages for pain and suffering, but suggesting that first-party insurance be tied to a fixed percentage of medical bills through which purchasers could "value their own propensity for pain and suffering"). Although these authorities' viewpoints are objectionable, the point is that the removal of pain and suffering from the calculus of tort damages is not by itself a novel idea.

¹⁵⁵ See, e.g., R. Keeton & J. O'Connell, *supra* note 52, at 323-24.

costs by assigning statutory amounts to specific losses that cause pain and suffering. Statutory amounts should be assigned to losses that are unrelated or only loosely related in magnitude to lost earning capacity, thereby forcing self-assessment of pain and suffering wherever feasible.

For example, legislation could declare that a lost limb is the equivalent of x years of earning capacity or that each year without the use of a limb would generate a recovery equal to one-half of that year's earning capacity. In either case, "earning capacity" refers to the statutory amount or the self-assessed amount, whichever is greater. By way of illustration, assume that U , in the earlier example, had self-assessed his lost earnings at \$20,000 a year by purchasing that amount of first-party coverage. Because he has lost the use of a limb (as a result of a tort) and yet lost no work time, under the first approach he would recover medical expenses and \$20,000 times x , regardless of his age.¹⁵⁶ The second approach considers pain and suffering as a yearly loss and would award medical expenses and \$10,000 times the number of years he is expected to remain alive, according to the relevant mortality table. This second approach offers the advantage of dealing with temporary losses. Thus, if with rehabilitation the injured teacher is expected to regain the use of the limb in two years, the award would include medical and rehabilitation expenses and \$10,000 times two, properly discounted to present value.

It is arbitrary and dehumanizing to reduce human suffering to scheduled amounts. Many questions are left open, only some of which are solved by longer schedules and finer descriptions of the horrors that befall victims. Nonetheless, conventional institutional assessments are every bit as arbitrary and surreal. There is thus much to recommend a system that saves trial time and other costs and, in some sense, allows resources to go to victims or other societal needs rather than to lawyers and other similar purveyors of costly transactions.

4. *Property Damage*

In the determination of property damages, self-assessment would be an accurate valuation method whenever the property

¹⁵⁶ The legislation may or may not require discounting to present value.

owner has purchased insurance. Thus, if *W* buys \$100,000 of fire insurance coverage on his property and *Y*'s tortious act destroys the property, the second half of the trial could be avoided by *Y*'s paying the insured amount to *W* or, if subrogation is adopted, to *W*'s insurer.¹⁵⁷ Alternatively, if a self-assessed or competitively-assessed property tax were in place, the tort system could easily piggyback on this other self-assessment system. Most tortious acts that destroy real property, however, damage parts of buildings rather than entire structures and, more important, devalue the buildings but not the underlying land.¹⁵⁸ The self-assessments noted above, of course, represent valuations of the entire property. Still, self-assessment will be useful in some cases and will represent a ceiling or starting point in others.

Self-assessment is of little importance in the determination of property damage, however, because conventional institutional assessment is already straightforward and does not generate great administrative costs. In fact, the courtroom process of evaluating property damages by way of repair costs and other data is likely to be identical with the process used by an insurer to decide how much coverage to offer. To the extent that insurance would not be purchased and a self-assessed property damage system would rely on schedules, these schedules would be no better and no worse than those offered in the courtroom in a conventional assessment.

The failure of self-assessment when applied to property damage can be traced to the issue of idiosyncratic tastes and intentions that figured so prominently in the discussions of assessments for property taxation and lost earning capacity compensation.¹⁵⁹ In those areas, the individual's personal tastes are taken quite seriously because some sources of value and happiness, such as good neighbors, breathtaking views, and two healthy years of life, are not easily reproduced in the marketplace. On the other hand, a car

¹⁵⁷ In fact, given the widespread use of "coinsurance" clauses in property insurance contracts, such assessments of property loss are apt to be more accurate than those contained in life insurance policies in the event of loss of life. For an explanation of how coinsurance operates, see R. Keeton, *supra* note 63, at § 3.7.

¹⁵⁸ The problem is analogous to appraisal difficulties that would arise in a property tax system limited to sites (rather than sites plus structures). Such a narrow tax base might eliminate the bias against improvements that is thought to mar the present property tax system. See D. Netzer, *supra* note 9, at 197-212; Mills, *The Non-Neutrality of Land Value Taxation*, 34 *Nat'l Tax J.* 125 (1981).

¹⁵⁹ See *supra* notes 34-38, 93-96 and accompanying text.

or bicycle that is tortiously damaged is more likely to be valued identically by the owner and an institutional assessor because it is easily reproduced and rarely the subject of idiosyncratic tastes or attachments. Similarly, a damaged piece of a house, as opposed to an entire property, is likely to be replaceable without permanent injury to personal tastes.

In any event, a self-assessment system for smaller pieces of property is too difficult to manage. Insurers will not offer \$20,000 of coverage for a \$5,000 automobile because the moral hazard is too substantial. The system theoretically could turn to "forcing buyers,"¹⁶⁰ but the complications and volume of transactions that would be involved hardly seem worthwhile in light of the marginal advantage that such an option might offer over conventional assessment. Moreover, to some extent idiosyncratic property valuations in excess of market value are reflected in the result in the first half of the tort trial by comparative negligence and similar principles. The more *W* values his vase or bicycle at an amount in excess of that which would be determined in a conventional assessment, the higher is *W*'s duty of care, and the more likely *W* is to have been negligent in a situation in which *Y*'s actions damage these items. Thus, honest self-assessors will rarely declare a valuation markedly in excess of market value and still be able to collect the entire self-assessed amount from a tortfeasor.

F. Self-Assessment Versus No-Fault

Self-assessment is not nearly so brave a concept as no-fault, which eliminates the first half of the tort trial and, to the extent that insurers pay out scheduled amounts that are not easily disputed, the second half as well. Most no-fault systems do leave some large claims to conventional liability determination and damage assessment.¹⁶¹ Essentially, then, the conventional tort system is left in place but with large "deductibles." No-fault treatment is accorded to claims that fall within the deductible amount.

The proposed system of self-assessment does not replace the first half of the tort trial, and rules governing liability determination would remain to deter undesirable behavior. Self-assessment

¹⁶⁰ See *supra* text accompanying notes 28-40.

¹⁶¹ See *supra* note 155 and accompanying text.

does eliminate, however, most of the second half of the trial by relying on controlled valuations by the injured party. Because some individuals will not self-assess and some components of damage are needed to fulfill compensation and deterrence goals but are not easily self-assessed, the system provides for limited scheduled compensation. Thus, some of the damage determination in this self-assessment system is similar in method and in cost-saving to the scheduled approach of a no-fault insurer.

Critics charge that no-fault laws impermissibly legislate unconstitutional takings.¹⁶² They argue that an injured individual has a property right in his claim against the injurer and that the state cannot force him to deal with his own insurer and, perhaps, bear the brunt of resulting insurance premium increases. This argument, though weak, is even less convincing when aimed at self-assessment systems because the injured party does collect, albeit indirectly, from the tortfeasor. The injured party loses his claim only to the extent of his own failure to assess properly or to the extent that scheduled damages do not provide sufficient compensation for pain and suffering that otherwise cannot be self-assessed. In any event, the constitutional attack on no-fault has been unsuccessful¹⁶³ and thus should pose little threat to self-assessment.

The strongest argument for no-fault rests on the institutional reality of widespread insurance coverage. When the tortfeasor has liability insurance and the injured party is also insured, the cases really involve insurer against insurer and it is often difficult to imagine that the real actors are responding to the deterrent effect of

¹⁶² See generally R. Keeton & J. O'Connell, *supra* note 52, at 504-14 (noting that some state constitutions expressly forbid any law limiting the amount recoverable for personal injuries and death); Dept. of Transp., *Constitutional Problems In Automobile Compensation Reform* (1970) (discussing various constitutional objections and concluding that, for the most part, state legislation of no-fault plans is unlikely to violate the Constitution).

¹⁶³ See, e.g., *Cyr v. Farias*, 367 Mass. 720, 327 N.E.2d 890 (1975) (holding that no-fault provision, barring recovery for pain and suffering unless reasonable and necessary medical expenses exceed \$500, did not violate constitutional guarantees of due process or equal protection); *Rybeck v. Rybeck*, 141 N.J. Super. 481, 358 A.2d 828 (1976) (upholding New Jersey Automobile Reparations Reform Act against claimed violations of due process, equal protection, and rights of access to the courts and trial by jury); *Montgomery v. Daniels*, 38 N.Y.2d 41, 340 N.E.2d 444, 378 N.Y.S.2d 1 (1975) (holding that New York's Comprehensive Automobile Insurance Reparations Act does not violate due process, equal protection, or the right to trial by jury). But see *Murray v. Ferris*, 74 Mich. App. 91, 253 N.W.2d 365 (1977) (striking down on equal protection and due process grounds a no-fault scheme creating a class of persons limited in their right to sue for damages).

liability rules. If deterrence is unimportant or is substantially diluted by the cushion of liability insurance, then there is no reason to absorb the costs of liability determination in the first half of tort trials. No-fault systems then are attractive in their ability to avoid these costs while continuing to spread risks.

On the other hand, to the extent that insurance premiums do reflect the tortious history of the insured, the existence of liability insurance does not contradict the deterrence features of the tort system. Ours is a world with some premium responsiveness, some uninsured actors, some insurance policies with substantial "deductibles" that serve to deter the careless or tortious, and some uncertainty. It is therefore difficult to assess the strength of the tort system's power to deter. Further research in this area is needed. Meanwhile, the important comparison between self-assessment and no-fault is the obvious one: self-assessment systems seek to offer the cost savings and simplicity of no-fault without sacrificing the ability of tort law to deter accidents.

III. SELF-ASSESSED STOCK VALUATION

A. *The Case of Two Shareholders*

Valuation problems are at the core of many issues in corporate law.¹⁶⁴ The special treatment of closely held corporations, as contrasted to that accorded more publicly owned corporations, is largely due to the absence of an active market in the shares of close corporations.¹⁶⁵ Unexpected organic changes and internal disagreements often require an appraisal of a close corporation's securities.¹⁶⁶ In the absence of a well-defined market value, such an appraisal is often an impossible task because the underlying corpo-

¹⁶⁴ See V. Brudney & M. Chirelstein, *Cases and Materials on Corporate Finance* 1-2 (2d ed. 1979).

¹⁶⁵ The close corporation has been described as a "chartered partnership." For a discussion of some of the unique aspects of the close corporation, see W. Cary & M. Eisenberg, *Cases And Materials On Corporations* 18-19 (5th ed. unabridged 1980). See also Hetherington & Dooley, *Illiquidity and Exploitation: A Proposed Statutory Solution to the Remaining Close Corporation Problem*, 63 Va. L. Rev. 1, 1-6 (1977).

¹⁶⁶ The enterprise may evolve so that the relative importance of the various owner-employees changes over time. Similarly, personal relations among the shareholders may become strained. An interest in the enterprise may have passed to an heir who is not compatible with the owners. Finally, one shareholder may simply want to abandon the joint effort. See Hetherington & Dooley, *supra* note 165, at 3.

rate assets are themselves difficult to value and future earnings hard to predict. Given the substantial literature on the difficulty of appraisals in this area, a review of the various appraisal techniques and their shortcomings is unnecessary.¹⁶⁷

Because the structure of this assessment problem closely resembles that encountered in the allocation of the property tax burden, it is no surprise to observe primitive self-assessment procedures in corporate stock valuations that are remarkably similar to those discussed earlier in this essay.¹⁶⁸ Consider the relatively simple and common problem that arises when two partners, Z and A, find themselves in fundamental disagreement over business policy and wish to part company. A court may or may not supervise the division. Certainly, it is possible to avoid any assessment problems by selling the entire business to an outsider and dividing the sale proceeds between the two owners. The ongoing business, however, may be worth more to either partner than it would be to an outsider, especially one who must be located quickly. Similarly, the ongoing business may be worth more than the sum of the halves, or the assets may be indivisible.¹⁶⁹ Indeed, in such circumstances, a court might threaten a sale or dissolution in order to encourage resolution of the problem by the partners themselves.¹⁷⁰

As an obvious but elegant solution to the partners' problem, Z

¹⁶⁷ See, e.g., Birk, Shareholders' Appraisal Process: Need For Reform, 51 N.Y. St. B.J. 274 (1979); Brudney, Efficient Markets and Fair Values in Parent Subsidiary Mergers, 4 J. Corp. L. 63 (1978); Buxbaum, The Dissenter's Appraisal Remedy, 23 U.C.L.A. L. Rev. 1229 (1976); Manning, The Shareholder's Appraisal Remedy: An Essay for Frank Coker, 72 Yale L.J. 223 (1962); Schreier & Joy, Judicial Valuation of "Close" Corporation Stock: *Alice in Wonderland* Revisited, 31 Okla. L. Rev. 853 (1978).

¹⁶⁸ For example, in a "buy-sell" agreement, a partner will value his own interest as part of a plan to provide for dissolution, retirement, or death. Sometimes these are "cross-purchase" agreements which require each owner to buy the other owner's share at a mutually agreed price. This latter arrangement resembles the one developed in the text. This is especially true if the owners are of similar age so that at the time of self-assessment it is unclear whether a purchase or sale by the self-assessor's estate is the more likely contingency. Note that if a cross-purchase agreement is triggered by death, a self-assessor might opt for a low valuation and purchase life insurance for his survivors' benefit. Note finally the resemblance to self-assessment for property taxes in that the buy-sell amount may be used for estate tax valuation. See generally A. Guild, Stock Purchase Agreements & The Close Corporation 29-36 (1967); Costantino & Morlitz, Buy-Sell Agreements: A Basic Review, 13 Prac. Acct. 31, 32 (Oct. 1980).

¹⁶⁹ For a discussion of "going concern" value, see V. Brudney & M. Chirelstein, *supra* note 164, at 3-35.

¹⁷⁰ See Hetherington & Dooley, *supra* note 165, at 26-30.

may suggest that *A* announce his internal valuation of half the company. *Z* would agree in advance either to buy out *A* at that price or to force *A* to buy *Z*'s share at that price. Although there are drawbacks to this plan, it is probably far superior to hiring an institutional appraiser whose knowledge of the prospects and intricacies of the business cannot possibly match *Z*'s or *A*'s. Accuracy aside, *Z*'s suggestion saves administrative costs because, unlike an outside appraiser, *Z* and *A* need not familiarize themselves with the business.¹⁷¹ In short, this solution is no more than a simple self-assessment plan. Much like the systems discussed earlier, this scheme would improve accuracy and reduce administrative costs by putting the valuation task in the hands of a party who is both intimately familiar with the property or interest involved and constrained from overassessing.

Still, *A* might object to *Z*'s suggestion and prefer that *Z* be the initial assessor. *A* then could choose between buying out *Z*'s half or selling off his own. There is, after all, an advantage inherent in the power to choose, and each party may prefer that the other be the one to reveal internal tastes first. Although it may be "fair" to meet *A*'s objection by randomly selecting either *A* or *Z* as the initial assessor, introducing randomness does not solve the inequality of the division that is the heart of *A*'s objection. Simply stated, randomness generates fair expected outcomes, but because there will be a single trial or event, one party is worse off. Consider, for example, the fairness of randomly awarding the entire business to *A* or *Z* on the basis of a coin flip.

Conceptually, *A*'s objection—which can be characterized as the "disadvantage of the first assessor" when choice by another party is to follow—is much like the objection that can be expected from the typical property owner under a simple system of self-assessed property tax valuations. It is easier to respond to another's valuation by becoming a "forcing buyer" or by simply ignoring the property's availability than it is to price one's own property and then

¹⁷¹ The hired appraiser may also be biased or may value risks in a manner quite different from the way either partner would. Note that the appraiser conceivably could be paid in a way that draws on the self-assessment principle. For example, an appraiser who values a corporate share at \$100, and is to be paid a fee of \$300, could be paid with three shares or forced to buy three shares. Apart from the fact that this scheme generates high transacting costs, it is impractical because it would often have substantial effects on voting coalitions and appraiser behavior.

wait for a higher tax bill or a forcing buyer to arrive.¹⁷²

The concept of idiosyncratic tastes¹⁷³ and the objection to their inclusion in the property tax base are related to the disadvantage of the first assessor. Imagine that *A* enjoys his line of work and would find it difficult and costly to begin such a business in another location. Although most people would value the "A-Z business" at \$100,000 and, therefore, *A*'s share at \$50,000, *A* values his own share at \$70,000 because he assigns a \$20,000 value to his idiosyncratic tastes. By suggesting that *A* be the first assessor, *Z* is really charging *A* for his tastes. If *A* announces a value of just less than \$70,000, *Z* may choose to sell his own half to *A*, who must buy under the terms of the arrangement. This arrangement forces *A* to pay an "extra" \$20,000 for something he already has. In other words, *A* may get little more pleasure from owning the entire business than from owning only half of it. If *A* likes the prestige or location of his half ownership, under the simple self-assessment suggestion he must risk parting with his ownership at less than its internal value, or pay for it "twice" if *Z* forces him to buy the entire business. This latter alternative may leave *A* with more of the business than he has use for.¹⁷⁴

¹⁷² The argument might also be expressed in terms of the burden of transacting costs. The first assessor must always proceed with the self-assessment task, while the chooser can normally wait to see if a challenging first assessor, i.e., a forcing buyer, materializes. Even after a forcing buyer makes a threat, the owner need only decide whether his internal valuation is greater or less than the value announced by the first assessor. It is less trouble, after all, to decide whether an asset is worth more or less than a stated value, than it is to determine the precise value of that asset.

In the case of a dissolving partnership or close corporation, only the latter burden is material. A sale is inevitable, so that both the first assessor and the chooser must undertake their respective assessments. The first assessor nonetheless bears the burden of announcing a dollar valuation while the chooser may be saved much hard work and expense by a first assessment that is far enough from his own general valuation to save him the task of valuing small considerations.

¹⁷³ See *supra* note 39 and text accompanying notes 34-36.

¹⁷⁴ The analysis reaches a similar result if the assumptions are reversed and *A* is assumed to have increasing marginal utility for shares in the enterprise. That is, *A* may enjoy the prestige of being a sole owner and therefore may value his share at \$55,000 and the second half of the business at \$65,000. (If *A* values the total firm at less than \$120,000, he may be satisfied with a sale to an outsider.). If *A* is the first assessor, he will announce a value of \$60,000 because he is willing to sell at \$55,000 and buy at \$65,000. He will now enjoy a \$5,000 "delight." For example, if *Z* accepts the offer, *A* will receive \$60,000 for a share he was willing to sell for \$55,000. If *Z* had been cast in the role of first assessor, however, *A* would be even better off. If *Z* announces any valuation other than \$60,000, then *A* will gain even more than a \$5,000 delight. If, for example, *Z* announces a \$62,000 valuation, *A* will

Similarly, the self-assessing homeowner may have an idiosyncratically strong distaste for moving. The simple self-assessment system requires this homeowner to pay for his tastes each year in the form of higher property taxes. If he undervalues his distaste for moving, he risks a forced sale that will leave him undercompensated. Competitive assessment would be an improvement from the perspective of the idiosyncratic homeowner precisely because it does not require the owner to be the first assessor. Often, no assessor will challenge the real limit of the owner's tastes, and the choice between somewhat higher property taxes and a forced sale will be an easy one. Finally, a competitive-assessment system that borrows from the concept of the second-price auction¹⁷⁵ is even more accommodating to the idiosyncratic property owner because it allows him to choose in a way that is harshest to the first assessor. Recall that the first assessor can be forced to buy the property at the price he announces. Yet he is only rewarded, and the property owner only taxed, based on the valuation of the second-highest assessor. The first assessor in this system gets no sympathy, however, because he is a volunteer commission-hunter.

Returning to the partnership example, note that A's objection to being the first assessor does not mean that he would prefer the work to be done by a paid appraiser. Rather, A is comparing the plan to one in which Z would assume the role of first assessor and A would have the relative advantage of choosing by going second. It is reasonable to assume that both A and Z would prefer to avoid the transacting costs involved in hiring and educating an outside appraiser. Furthermore, although there are disadvantages to being first assessor, Z may be similarly displeased with the result of the split even though he goes second. He, too, may have to pay "twice" for something, because A may announce a value that would undercompensate Z. Yet, if Z buys out A at this price, Z may be paying some premium for the second half of the company, although it is the first half that really appeals to him at a level above market value.

The real objection to being first assessor is not, therefore, the possibility of having to pay for an unwanted asset. This is a result of the inability to get an outsider to value the company as highly

agree to sell the share that he willingly would have sold for \$55,000.

¹⁷⁵ See *supra* text accompanying notes 44-46.

as A and Z do and not a feature of the order of assessment. Instead, the first assessor's true objection is to the expected magnitude of the payment. For example, imagine that the market value is still \$50,000 for one half of the business and A's internal valuation is \$70,000 for his own share, but only \$130,000 for the entire business because, as before, the first half is worth more to him than the second half. Thus, A would be willing to sell his share for \$70,000 or buy Z's for \$60,000. A cannot benefit if, instead of choosing, he must assess. As first assessor, A might compromise with himself, in risk-neutral fashion, and announce a valuation of \$65,000. Whether Z decides to buy or sell, A will "lose" \$5,000 in the sense that he will be that much worse off than before the split. If Z were the first assessor, however, A might emerge from the split in somewhat better fashion. If Z announces a valuation of \$65,000, then, of course, A is no better or worse off. If he buys Z's share or sells his own at that price, he is disappointed to the extent of \$5,000. If, however, Z's own tastes or strategy lead Z to announce any other valuation, A's lot will improve. If, for example, Z announces a value of \$68,000, A will sell his own share and suffer a \$2,000 disappointment. A will not buy Z's share because he only values the second half at \$60,000. An announced valuation by Z above or below A's two valuations produces real relief for A and points more decidedly to the disadvantage of the first assessor. For example, if Z announces a valuation of \$72,000, A will gladly sell his own share and be better off than he could possibly have been after any nonrisky first assessment of his own. In short, it is disadvantageous to reveal one's preferences when another party has the subsequent right to choose.

This refined explanation of the first assessor's disadvantage does not change the analogous disadvantage to the homeowner in a system of self-assessed property taxes. The property owner does not compete with a partner but with society at large, because in property tax valuations the government and the owner are dividing up an asset. All owners cannot be disadvantaged, because the government merely alters the tax rate in order to collect the revenues it needs. It is the property owner's relative tax burden that is at stake in the choice of an assessment system. In the simple self-assessment system, the idiosyncratic owner is disadvantaged because he must reveal his tastes before all the other individual assessors choose to buy. Competitive assessment removes this objec-

tion. It disadvantages the idiosyncratic owner only to the extent that a volunteer responds to the reward system and puts himself in the position of first assessor. When the volunteer announces a value that is above the nonidiosyncratic market value, yet below the owner's own internal value, the owner's objection is to any tax on value that would not be recognized by an institutional assessor. This remaining disadvantage to the idiosyncratic owner who is not the first assessor corresponds to A's disappointment, in the previous partnership example, when Z is the first assessor and announces a price that is higher than A's valuation of the second half, but lower than A's valuation of the first half of ownership.

These objections to self-assessed and competitively assessed property taxes and to the use of self-assessment in the splitting of a partnership are thus analogous. The idiosyncratic owner and the first assessor are disturbed by the realization that their relative burdens might have been lightened by the use of a different process. Yet both may be better off than under a regime of institutional assessment because transacting costs are avoided. Indeed, even they may prefer the improved accuracy of self-assessments as compared with institutional assessments, despite their relatively disadvantaged positions within the respective self-assessment systems.

In contrast to the property tax and partnership dissolution contexts, an attractive feature of the proposed system for self-assessed compensation in tort law is the absence of any disadvantage to the first assessor. In self-assessed tort damages, no party is relatively disadvantaged because no choice follows the revelation of tastes and preferences. The only conceivable relative disadvantage befalls the individual whose self-assessed needs are above the statutory amount, but who would honestly prefer not to carry first-party insurance. If this preference is more important than the system's effect on administrative costs, then the proposed system is undesirable to this individual in an absolute sense as well. Nonetheless, such individuals must surely be rare.

B. Stock Valuation in Corporate Freezeouts

Arguably, the numerous complications that attended Z's suggested approach to dividing the partnership could have been avoided by a system that required no ordering of decisionmaking and thus no relative disadvantages. For example, a third person

could call out increasingly larger dollar amounts and instruct A and Z, who would be out of each other's sight, to signal as soon as the third party had reached an acceptable sale price. The party that signalled first would force a sale on the silent partner. Thus, on the facts described earlier, as the caller reached \$65,000, A would signal his willingness to sell and Z would be required to purchase A's share at that price. There is no need to compare in any detail the properties of this scheme with those of Z's first suggestion, but it is clear that neither A nor Z is asked to reveal tastes before the other, and, therefore, the relative disadvantage of the first assessor is eliminated. The beauty of this "simultaneous assessment" system is that it is easily applicable to divisions among three or more partners. The caller can begin with a very large number and work his way down. A partner is to signal as soon as he is willing to buy out all the other partners at that price per share.

To prevent confusion while developing principles relevant to the other arenas of self-assessment and to more complex corporate stock sales, the discussion in the previous section did not raise this possibility of "simultaneous assessment." Simultaneous assessment works well in the partnership illustration only because of the reciprocal nature of the parties' relationships; in such a context, the parties are able and willing to buy each other out, at least at some reasonable price. In fact, the discussion up to this point implicitly has assumed that neither A's nor Z's valuation was affected by a budget constraint. Often, however, this will be a real problem. A may be pleased to buy Z's share for \$65,000, but Z may be unhappy buying A's share for more than some small amount of money. Z's portfolio, wealth, and risk attitude may be such that he cannot afford to own a larger piece of the enterprise. Simultaneous assessment now places Z in the same disadvantaged position as the first assessor. Under simultaneous assessment, he is forced early on to reveal his distaste for purchasing A's share.

Similarly, the simultaneous assessment principle lacks utility in the contexts of tort damages and property tax burdens because the disadvantage of the first assessor is not a problem in either of these two areas. The proposed tort compensation system does not call for a chooser to act after the self-assessment because the self-assessor is the first and only assessor. In the property tax arena, competitive assessment meets the first assessor's objection by al-

lowing the property owner to be the chooser. There the first assessor is the outside volunteer. Although this latter scheme may fail to take idiosyncratic tastes sufficiently into account in the tax base, recall that the system was designed to be an acceptable alternative to conventional assessment in which idiosyncratic tastes are not included at all.

There remains the task of designing a stock valuation system for a shareholder who may be unwilling to purchase the shares of all of his fellow shareholders. Normally, the marketplace itself, however thin,¹⁷⁶ offers such a system. When a shareholder, *B*, purchases stock in a corporation, *T*, the corporation rarely guarantees *B* an assured market should he decide to sell his shares. Instead, *B* is relegated to the marketplace, as are the owners of most goods in our economic system. Thus, *B* is normally able to sell his shares at market price, although he may be unwilling to buy more shares at that price. It is conceivable that the managers of *T* owe a fiduciary duty to *B* that would prevent them from undermining the market for the corporation's shares. In other words, *B* may expect *T*'s managers not to make shares of *T* less marketable than they were when he first purchased them.¹⁷⁷ The nature of this expectation depends on the law of fiduciary duty and thus remains outside the scope of the present article.

There are nonetheless some transactions in which the market disappears entirely. If the corporation is dissolved or sold in its entirety to an outsider, the corporation's charter or bylaws, or the state corporation law, provides for *B*'s compensation. Each shareholder normally receives a pro rata share of the assets or sale proceeds.¹⁷⁸ The situation is then as simple as the division of the *A-Z*

¹⁷⁶ The thinner, or less active, the market for a particular company's stock, the more ambiguous become the concepts of "value" and "market price." See *supra* note 17 and text accompanying notes 14-17. Still, if an owner had been aware of the market's thinness when purchasing his shares, he may have believed that the existing market valuation system was adequate.

¹⁷⁷ Arguably, such an action would be the equivalent of eliminating dividends in an effort to suppress the market price. For a case that may have centered on the disadvantages of a thin market, see *Jones v. H.F. Ahmanson & Co.*, 1 Cal. 3d 93, 460 P.2d 464, 81 Cal. Rptr. 592 (1969).

¹⁷⁸ Although most statutes do not explicitly require a pro rata division of assets or equal treatment of shareholders, such a requirement follows from the common law's fiduciary standard and can be inferred from the working of various statutes. See, e.g., Del. Code Ann. tit. 8, § 281 (1979); Model Business Corp. Act § 92 (1969).

business when an outsider is willing to pay an amount equal to the value placed on the business by *A* and *Z*.¹⁷⁹ On the other hand, *T* corporation may go through an organic change—accompanied by the disappearance of the market for its stock—that is not followed by pro rata distributions of cash or assets.¹⁸⁰ Each shareholder of *T* may then be entitled to an appraisal proceeding¹⁸¹ as a substitute for the now defunct market.¹⁸² As part of certain of these organic changes, *B* may be forced to abandon his shareholder status and accept a specified amount of cash in return for his stock. Some of these organic changes have been regarded as altogether objectionable.¹⁸³ Others, however, are generally accepted as socially beneficial,¹⁸⁴ much like eminent domain, but the method of determining

¹⁷⁹ If *A* and *Z* are satisfied with an outsider's offer, they can easily accept the offer and divide the proceeds in pro rata fashion.

¹⁸⁰ In other words, it is reasonably simple to divide the proceeds of a dissolution or sale of assets among the shareholders on a pro rata basis. Other structural changes, however, do not yield easily distributable proceeds. For example, after a merger with *S*, *T* may continue to exist in a form quite different from its premerger state; the new *S-T* stock may have marketability characteristics quite different from those of the old *T* stock.

¹⁸¹ See, e.g., Del. Code Ann. tit. 8, § 262 (1979); Model Business Corp. Act § 81 (1969).

An appraisal proceeding is a process through which the "fair value" or "fair market value" of a stock is determined so that a shareholder may require the corporation to buy his shares at this "value" when he dissents from certain structural changes. M. Eisenberg, *The Structure Of The Corporation—A Legal Analysis* 69 (1976). In order to compute this value, most courts rely on some combination of net asset value, market value, and capitalized earnings. See, e.g., *Piemonte v. New Boston Garden Corp.*, 377 Mass. 719, 387 N.E.2d 1145 (1979). See generally Note, *Valuation of Dissenters' Stock Under Appraisal Statutes*, 79 Harv. L. Rev. 1453 (1966).

¹⁸² Manning, *supra* note 167, at 261 ("Appraisal should be considered an economic substitute for the stock exchange and its use should be limited to situations in which the exchange, or some kind of a reasonable market, is not available.").

¹⁸³ The objections arise from the perception that these maneuvers create potential for self-dealing by insiders, while lacking substantial business justification. In a "going private" transaction, for example, controlling shareholders terminate public stock ownership and return the corporation to the status of a close corporation. As insiders may have hidden reasons to be optimistic about the firm's future, "going private" may merely be a way for them to deny the current public ownership the benefits of these projected future gains. For the classic condemnation of these transactions, see Brudney & Chirelstein, *A Restatement of Corporate Freezeouts*, 87 Yale L.J. 1354, 1365-70 (1978).

¹⁸⁴ In an "integrated" or "two-step" merger, an outside acquirer becomes the sole owner of the acquired corporation. This acquirer may be unwilling to settle for less than total control and, therefore, a ban on freezeouts or on other techniques by which shareholders can be forced out could stifle desirable acquisitions and the improvements they bring. Thus, the social good that derives from allowing freezeouts might be thought to overcome the distaste for forced sales. *Id.* at 1359-65.

There is also a powerful argument for allowing these forced sales or structural changes in

the amount of *B*'s compensation is a much debated topic.¹⁸⁵ Since it is this compensation question that is the subject of this article the discussion now turns to a specific example in which the need for an appraisal remedy would arise.

Consider the events that occur when conglomerate corporation *C* seeks to acquire target corporation *T*. The managers of *C* and *T* might negotiate and agree on a sale of assets by *T* to *C*. Often, if such a sale agreement is reached, no shareholder of *T* (such as *B*) would be able to object to the result.¹⁸⁶ A shareholder vote might be necessary, but a "dissenter" would normally be powerless to do anything other than accept his pro rata share of the proceeds.¹⁸⁷ Conceptually, such a result can be rationalized by noting that *B* was represented by *T*'s managers and there is every reason to expect that these managers negotiated as good a deal as possible for *T* as a whole and, therefore, for each *T* shareholder. If *B* cannot dissent from the ongoing business decisions of *T*, then why should he be able to upset a decision to sell assets?

Yet imagine that these negotiations between *T* and *C* have fallen through. *C* now announces its willingness to deal directly with *T*'s shareholders and to purchase any and all *T* shares at twenty dollars per share. *T* shares have been selling at a price near sixteen

the context of a merger between a parent and its subsidiary. (Of course, if the subsidiary is a new one, the parent is really completing the second step of an integrated merger and the previous discussion applies.) There may be scale economies to a combination of the two entities. Moreover, future fiduciary problems can be avoided by combining the parent and its partially owned subsidiary into one unit. The terms of this merger must be judged for fairness because the managers of the subsidiary can hardly be expected to bargain vigorously in setting the terms of the merger. A "proportionate sharing" rule has been proposed for such mergers. Under such a rule, the subsidiary's shareholders would be compensated (normally with shares in the new combined entity) for the value of the premerger subsidiary plus a proportionate share of the "synergy," or added value, created by the corporate combination. *Id.* at 1370-76. See also *Mills v. Electric Auto-Lite Co.*, 552 F.2d 1239 (7th Cir.), cert. denied, 434 U.S. 922 (1977).

¹⁸⁵ See Brudney & Chirelstein, *Fair Shares in Corporate Mergers and Takeovers*, 88 Harv. L. Rev. 297 (1974); Brudney & Chirelstein, *supra* note 183; Lorne, *A Reappraisal of Fair Shares in Controlled Mergers*, 126 U. Pa. L. Rev. 955 (1978); Toms, *Compensating Shareholders Frozen Out in Two-Step Mergers*, 78 Colum. L. Rev. 548 (1978).

¹⁸⁶ Compare Del. Code Ann. tit. 8, § 271 (1979) (requiring a majority vote of the outstanding stock to approve a decision by the board of directors to sell all the corporation's assets, but not providing an appraisal remedy to dissenting shareholders) with Model Business Corp. Act §§ 78-80 (1969) (reserving the power to dissent when assets are sold other than "in the regular course of business").

¹⁸⁷ See, e.g., *Hariton v. Arco Elec., Inc.*, 41 Del. Ch. 74, 188 A.2d 123 (1963).

dollars. Most of *T*'s shareholders are thrilled by the prospect of this tender offer premium and so sell their shares to *C*. Assume that ninety-two percent of *T*'s shareholders follow this path. *B* and a few others do not tender.¹⁸⁸

Buoyed by its success and eager to own all of *T*, *C* now wishes to purchase the remaining shares outside its control. The law is inclined to allow a forced sale or "freezeout" of the dissenting shareholders, as it probably should.¹⁸⁹ *C* may have a new plan for *T*'s business and it does not wish to share the resulting profits with *B* and other surviving shareholders. If *C* is limited to ninety-two percent of the value of its good plan, it may, in the future, invest its resources elsewhere so that its own rate of return will be maximized, even though, from society's perspective, investment in *T* offers a higher rate of return. Put somewhat differently, if *C* is forced to share the value of its plans with *B*, *C* may needlessly gather assets and set up a competitor to *T*. This would drive *T* out of business and its assets into disuse, when efficiency would be better served by *C*'s utilizing *T*'s assets. Thus, *B* and his codissenters may well hold out and seek to exploit their situational monopoly at the expense of society.¹⁹⁰

¹⁸⁸ Note that a small shareholder (much like a voter in a presidential election) may realize that he is most unlikely to affect the outcome of the tender offer and therefore may refuse the offer and hope to share, or free ride, in the profits that result from the acquirer's better idea. On the strength of this theory, it has been suggested that the corporate charter attempt to exclude nontendering shareholders from posttakeover profits. See Grossman & Hart, *Takeover Bids, the Free-Rider Problem, and the Theory of the Corporation*, 11 *Bell J. Econ.* 42 (1980). A full discussion of the impracticality of this solution is beyond the scope of the present article, but it is important to realize that many reasons exist for refusing to tender. See *infra* notes 194-97, 199-201 and accompanying text.

¹⁸⁹ See, e.g., Del. Code Ann. tit. 8, § 253 (1979) (90% ownership requirement); Model Business Corp. Act. § 75 (1969) (allowing a parent and its 90% owned subsidiary to merge by action of the board of directors without the approval of either corporation's shareholders).

¹⁹⁰ The dissenter triggers a classic showdown between property rights and socially desirable projects. Although it requires "just compensation," the law permits the government to emerge victorious from such a confrontation without offering similar power to private parties who might like to take from others and turn over the "fair value" of what has been taken. In markets other than the stock market, an acquirer, such as a real estate developer or mining company, may be able to do without this power of the forcing buyer because the seller may be unaware of the acquirer's intentions or "better idea." In fact, the acquirer may employ an intermediary to effect the purchase in a way that will not arouse the seller's suspicions. Legislation affecting the securities market, however, denies the acquirer these opportunities. To ensure that shareholders are treated alike and perhaps to protect the reigning managers from "pirates," the Williams Act requires an acquirer to reveal its inten-

In any event, assume that *C* forces out the remaining *T* shareholders by using a "short-form merger,"¹⁹¹ or other legal technique designed to facilitate *C*'s business activity and counteract the power of holdouts. What compensation should *B* receive? In short, what is the "right price" for the second step of a two-step acquisition?

Professors Brudney and Chirelstein have suggested that the freezeout price should be identical to the tender price, in this case, twenty dollars.¹⁹² Presumably, any higher price would encourage shareholders not to tender in the first step of the acquisition, and *C*'s new idea might be lost because of this gaining by shareholders. On the other hand, a lower price would create a "whipsaw" effect, in which risk-averse shareholders would tender their shares at a price less than their internal valuations out of the fear that the tender offer would be successful and the freezeout price leave them in a still worse position.¹⁹³ Moreover, matching the twenty-dollar tender price recreates, in a sense, the pro rata result that would have occurred had the management of *T* been able to negotiate a sale of assets to *C*.

An alternative to the "equal payments" solution of Brudney and Chirelstein is to take more seriously the "intrinsic value" of the shares to those shareholders who have been frozen out. Commentators have suggested that an appraiser should determine the price to be paid in this second step using not only traditional valuation

tions once it owns five percent of a registered company's stock and before it makes a tender offer. See Securities Exchange Act of 1934, § 13(d)(1), 15 U.S.C. § 78m(d)(1) (1976 & Supp. III 1979) (as amended by Williams Act, Pub. L. No. 90-439, § 2, 82 Stat. 454 (1968) and subsequent amendments (1970, 1977)). Although this might appear to allow market purchases by the acquirer or its agent to proceed without any disclosure, the Securities and Exchange Commission and some courts have considered some market transactions to be tender offers. See W. Cary & M. Eisenberg, *supra* note 165, at 1571-73. Of course, there would be less of a need for freezeouts if securities legislation did not require the disclosure that it does. Without such disclosure, bargaining would be untainted and it would be easier to conclude that an obstinate seller really assigned a high internal value to his shares and was not a holdout trying to extract an unfair share of the acquirer's better idea.

¹⁹¹ Short-form mergers obviate the need for shareholder voting. See *supra* note 189. See generally Note, The Short Merger Statute, 32 U. Chi. L. Rev. 596 (1965).

¹⁹² Brudney & Chirelstein, Fair Shares in Corporate Mergers and Takeovers, 88 Harv. L. Rev. 297, 336-40 (1974). The discussion in the text ignores the difficulties that arise if other events significantly affect the price of *T*'s stock in the post-tender but pre-freezeout period. If such events occur, some intrinsic valuation will be necessary or interest will need to be awarded on the stock held in the interim.

¹⁹³ *Id.* at 337.

data about the companies themselves but also information that is shareholder-specific.¹⁹⁴ After all, *B* may have refused *C*'s tender offer not only because *B*'s prediction of *T*'s future is optimistic¹⁹⁵ but also, for example, because *B* may have a low basis in these *T* shares and be in a high marginal tax bracket.¹⁹⁶ The appraiser would calculate *B*'s compensation to include *B*'s tax liabilities and the cost of reinvesting in similar enterprises. Presumably, this appraisal could be done either by adding appropriate amounts to the tender price or by starting from scratch and appraising the value of *T*, the value of any "synergy" created by the joinder of *C* and *T* (to be divided between *C* and *T*),¹⁹⁷ and the need for shareholder-specific compensation.

Neither of these proposals is necessarily fair or economically efficient. The successful tender offer price is not so much a recreated

¹⁹⁴ Elfin, *Changing Standards and the Future Course of Freezeout Mergers*, 5 J. Corp. L. 261, 272-73 (1980); Toms, *supra* note 185, at 575-85.

¹⁹⁵ The market price reflects only the marginal market transaction. Inframarginal purchasers are likely to have bought the share at a price below that which they would have been willing to pay. This differential has been referred to as the "consumer surplus." See *supra* note 35. When the good in question is a share of corporate stock, one may presume that any consumer surplus derives from the purchaser's relatively optimistic forecast about the investment return for the given risk that is available from this share. For an explanation of why the purchaser's optimism does not lead him to buy an infinite number of shares in this investment, see *infra* note 199.

¹⁹⁶ See Toms, *supra* note 185, at 569-70. The two causes of "honest dissent" that are offered in the text are quite independent of one another. Even if the individual demands for investments are such that it is difficult to imagine some shareholders with a small stake in a corporate enterprise honestly insisting on their excessive optimism for the firm's future, the different tax circumstances among shareholders provide an adequate explanation for "honest dissent."

¹⁹⁷ Although Toms appears to agree with the Brudney-Chirelstein proposal to allocate a fair share of synergistic gains to the subsidiary's shareholders, he breaks with Brudney and Chirelstein over the proper treatment of dissenters to the second step of an integrated merger. Brudney and Chirelstein, apparently sympathetic to the need for incentives in the acquisitions market, would not force an outsider to share its "better idea" under the terms of the second step of its takeover. To be sure, the dissenters to whom Toms would give valuation rights ought to get some synergy in the sense that their corporation may have been desirable to other acquirers. This potential to attract a premium in a merger or sale of assets is itself a valuable asset that belongs entirely to the target. This asset, however, is not one that requires the particular "better idea" conceived by *C*, the actual acquirer. Its value was already reflected in the market price of *T*'s stock. In sum, although Toms would proceed with a "fair shares" division of the synergy, allocated according to the pre-merger intrinsic values of the two companies, a better approach preserves the incentives for an outside acquirer. The intrinsic valuation therefore should include synergistic gains only to the extent that these could have been expected before the acquirer arrived.

bargain as it is the result of a variety of psychological factors. *T*'s shareholders respond to *C*'s offer based on their judgment of whether *C* will come forward with a still better offer, whether some other offeror will appear, and their own tax circumstances.¹⁹⁸ Therefore, this price—and matching it in the second step—is less related to the price needed to stimulate desirable acquisitions than first might have appeared. The alternative proposal that calls for a second-step appraisal, including compensation for tax liabilities and other shareholder-specific concerns, however, also does little to ensure an efficient acquisitions market. Shareholders who might have been inclined to tender in the first step may hold back and hope for tax compensation in a freezeout. Desirable takeovers may be stalled because an insufficient number of shareholders will initially accept the tender offer. Moreover, any such appraisal entails administrative costs and is likely to be highly speculative and inaccurate.

If self-assessment is to be of any use in the takeover and freeze-out tangles, then it must overcome *B*'s obvious interest in insisting on a very high valuation. Note that *B*'s claim of an internal value greater than the market value of sixteen dollars is plausible. This market value only reveals that *B* did not want to buy any *more* shares at this price, perhaps because of his taste for a diversified portfolio. *B*'s demand for shares of *T* corporation may well be like most demand curves and exhibit diminishing marginal utility for each additional share purchased.¹⁹⁹ The average value to *B* of the

¹⁹⁸ This ignores the possibility that a tender offer will be rejected by a shareholder who seeks a free ride on postmerger synergy. See *supra* note 188.

¹⁹⁹ See *supra* note 195. The "optimism" argument is complete if *B* can offer some rationale for his not purchasing increasing amounts of *T*'s stock to match his optimism about *T*'s future. The concept of diminishing marginal utility provides such a rationale. See P. Samuelson, *Economics* 408-09 (11th ed. 1980).

Imagine a world in which stores are closed or out of stock and *B* finds himself shirtless. One seller materializes and offers to sell one shirt. *B* may well pay \$300 for a shirt that would normally sell for \$15, for *B* does not relish the idea of appearing for work half-naked. The seller then offers a second shirt. We can expect *B* to pay somewhat less than \$300, because his concern is now one of frequent laundering rather than nakedness. Similarly, third and fourth shirts will sell for still less. *B*'s demand curve for shirts thus slopes downward and exhibits diminishing marginal utility. Assume that after acquiring a tenth shirt for \$14, *B* would only pay \$12 for an eleventh shirt. The "market price" may appear to be \$14, but it would hardly be fair or efficient to allow a stranger to take away all 10 of *B*'s shirts for \$140.

Shares of *T*, like these shirts, are unavailable in the market. Furthermore, *B*'s attitude

shares already owned is almost certainly more than sixteen dollars.²⁰⁰ The law does not allow one party to take the property of another and leave a sum of money equal to its prevailing market price.²⁰¹ This ought to be especially true where it is impossible to replicate the item taken. This is *B*'s position because it obviously is impossible for him to replenish his stock in *T* corporation.²⁰²

In sum, this difficult valuation problem is complicated by the desire to see efficient takeover bids succeed so that "better ideas" for the management of *T* can be implemented. This problem is a search for a sensible middle ground between disallowing any forced sale, even at a price much higher than the prevailing market price, and allowing holdouts to interfere with socially desirable acquisitions. A self-assessment solution must draw on the strength of the proposed system for tort compensation and insist on self-assessment *before* the obligation to compensate is triggered. Self-assessed tort damages were thought to be accurate because the proposed system required first-party insurance coverage to be purchased before any accident or liability determination took place. In fact, when purchasing such insurance, the self-assessor is likely to know that the probability of recovery from a tortfeasor is much lower than the probability of recovery from an insurer. Insurers will often pay out on policies with no prospect of subrogation. Insurance premiums will reflect this fact and discourage overassessment.

toward risk is likely to affect his taste for shares of *T* much as a growing wardrobe affected his willingness to buy more shirts. If *B* were to purchase more and more shares of *T*, his portfolio would become increasingly less diversified. Thus, it is reasonable for *B* to insist that he values his shares, on average, in excess of the market price—but that risk considerations constrain him from making further purchases of *T* stock.

²⁰⁰ See *supra* note 199. Only an extremely elastic demand curve would cause *B* to value all his shares at or near market price. Elasticity refers to the responsiveness of quantity demanded to price changes. Such elasticity or "flatness" of *B*'s demand curve could derive from unusual indifference to increased risk or substantial enough wealth in other investments so that additional shares of *T* barely affect the riskiness of *B*'s overall portfolio.

²⁰¹ For a discussion of how property rights serve the economic function of developing incentives to utilize resources in a socially efficient manner, see R. Posner, *supra* note 57, § 3.1.

²⁰² There is an obvious analogy between freezeouts and forced sales in the context of the self-assessment system for property tax valuation. The reader who disapproved of the latter—because of the forced sales that were adopted in order to guard against underassessment—ought to be quite sympathetic to the frozen-out shareholder whom this self-assessment system for corporate mergers seeks to protect.

A similar system of prior self-assessment might be feasible in the securities area. After the offeror-conglomerate *C* announces that it will proceed with a tender offer for the shares of the target corporation *T*, but before *C* announces its tender price, the system could conceivably require all stockowners of *T* to submit sealed envelopes containing internal valuations of their shares. In the event that *T*'s shareholders are frozen out within a reasonably short period, these self-assessed valuations would determine their proper compensation. Thus, if *B* is in a particularly vulnerable tax bracket, he can add the additional tax liability into his self-assessed amount. The system needs to include a device—like forced sales for property taxes and insurance premiums for tort damages—that guards against overassessment. One possibility recognizes that the acquirer *C* may be satisfied with the share of ownership that it acquires during the takeover's first step, the tender offer. After all, not all tender offers are followed by freezeouts. Self-assessing shareholders would not be permitted to be inconsistent in their behavior. For example, if *B* self-assesses at twenty-two dollars and *C*'s tender offer is then at twenty dollars, *B* would be unable to tender his shares and accept the twenty dollar price, which includes the substantial premium above recent market value. If *C*'s tender offer is nevertheless successful and then *C* does proceed to freeze out the minority shareholders, *B* would receive twenty-two dollars for each of his shares.

The internal valuations gathered in preparation for a freezeout can be put to an interesting and different use. Some commentators have argued that the law tends to discourage desirable corporate acquisitions and that takeovers ought to serve as a check on entrenched management.²⁰³ In fact, the very idea of trying to satisfy the internal valuations of dissenting shareholders, however honest, would probably be abhorrent to such writers who already argue that desirable takeovers are stymied by transacting costs and legal obstacles.²⁰⁴ Self-assessment and the submission of internal valuations, however, can actually make *C*'s takeover less expensive. If *C* is interested in purchasing a controlling interest in *T*, the shareholders' self-assessments could be totalled and *C* informed of the

²⁰³ See, e.g., Easterbrook & Fischel, *The Proper Role of a Target's Management in Responding to a Tender Offer*, 94 Harv. L. Rev. 1161 (1981).

²⁰⁴ *Id.* at 1174-75. See generally V. Brudney & M. Chirelstein, *supra* note 164, at 716-20.

amount necessary to satisfy—but not exceed—each and every internal valuation until the desired ownership interest is acquired. *C* could then choose this shareholder-by-shareholder acquisition route over the tender offer or two-step pattern.²⁰⁵ In a sense, this system would substitute shareholder-by-shareholder bargaining²⁰⁶ for the sale-of-assets bargain that was never reached by the managers of *C* and *T*.

To see how this system can help the acquirer *C*, imagine that eighty percent of *T*'s shareholders are willing to sell at eighteen dollars, twelve percent at twenty dollars, seven percent at thirty dollars, and one percent at sixty dollars. A twenty dollar offer would succeed in acquiring ninety-two percent of the outstanding shares at a dollar cost of $1840x$, where x represents one percent of the total number of outstanding shares. A freezeout under the Brudney-Chirelstein rule would cost another $160x$,²⁰⁷ for a total acquisition cost of $2000x$. If *C* is permitted to pay only the self-assessed amounts, ninety-two percent ownership can be acquired for $(80x \times \$18) + (12x \times \$20) = 1680x$. The "freezeout" will cost an additional $(7x \times \$30) + (1x \times \$60) = 270x$, for a total acquisition cost of $1950x$. Thus, in this example, the entire target company *T* can be purchased at a lower cost, even if every shareholder's expectations are satisfied. Of course, not all examples will turn out this way, but the point is that a self-assessment system that satisfies all internal valuations is not necessarily more discouraging to acquirers than the more traditional system that forces some shareholders out at a price less than their internal valuations. Thus, the internal value model actually may be more advantageous for acquirers than the pro rata model.

Some shareholders will be willing to gamble and self-assess at a level far above that called for by their internal valuations. These shareholders concede the loss of a premium if the acquirer only goes through the first step of the acquisition or backs away from it

²⁰⁵ *C* should be required to pay some or all of the transacting costs required for this scheme in order to discourage mildly-interested acquirers or accomplices of *C* from inspecting the sealed "bids" of all *T*'s shareholders.

²⁰⁶ Such bargaining is not really recreated because each shareholder's first offer, itself somewhat biased by the shareholder's expectations regarding the acquirer's behavior, is accepted. This first offer is likely to exceed the shareholder's reservation price.

²⁰⁷ Using the "equal payments rule," the freezeout price will be \$20 and will be paid to eight percent of the shareholders for a total of $160x$.

altogether. They take this risk in hope of a large profit in the event of a freezeout. Put plainly, the system's guard against over-assessment may be too weak. It is possible to strengthen this guard by placing an arbitrary limit on the premium that can be self-assessed. For example, any assessment that is more than forty percent²⁰⁸ above the recent market price could be ignored. In the previous example, since the market price was sixteen dollars, no self-assessment above \$22.40 would be honored. Under this system, after a twenty-dollar tender offer at a cost of $1840x$, a freezeout could be accomplished at $179.2x$, for a total cost of $2018.2x$.²⁰⁹ Alternatively, if the acquirer is permitted to bypass the tender offer and purchase stock at each shareholder's internal valuation level, then with the forty percent ceiling on self-assessed premiums the entire target could be acquired for $(80x \times \$18) + (12x \times \$20) + (8x \times \$22.4) = 1859.2x$.

The problem presented by gambling self-assessed shareholders can also be solved by appealing to the familiar "forcing buyer."²¹⁰ The tender offeror *C* would be allowed to purchase the minority shares in the second step or freezeout stage of the acquisition at the self-assessed prices or, perhaps, *force the self-assessor to purchase* a certain number of shares, such as 100 shares or twenty-five percent of the number owned by the self-assessor, at the self-assessed price. Conceptually, this scheme permits the acquirer to "doubt" the self-assessment and force a purchase of some shares owned by the acquirer. Under this system, the sixty-dollar self assessors in the previous illustration could be forced by *C* to purchase some shares at the sixty dollar price. Given that *C* may

²⁰⁸ The 40% limit is selected because it matches some of the higher estimates of tender offer premiums. These studies reach different conclusions because, among other things, they compare the tender offer prices to different pre-tender market prices. In the pre-tender period, stock prices may have been bid up by insider trading, general market conditions, and random events. For a summary of some of these studies, with estimates of premiums that vary from 15% to 40%—or even 49% if the pre-tender period is extended to two months—see Bradley, *Interim Tender Offers and the Market for Corporate Control*, in *Economics of Corporation Law and Securities Regulation* 222, 228-29 (R. Posner & K. Scott eds. 1980). Some evidence indicates that the "arbitrary limit" in the text ought to be 50% or higher. S. Lee & R. Colman, *Handbook of Mergers, Acquisitions and Buyouts* 18-19 (1981) (calculating the average premium in 1979 for 229 acquisitions to be 49.9% compared with 46.2% for 240 transactions in 1978).

²⁰⁹ The freezeout step would involve eight percent of the shares and require a ceiling price of \$22.40 per share. $\$22.4 \times 8x = 179.2x$.

²¹⁰ See *supra* text accompanying notes 41-43.

intend to carry out only the first step, this is a very real threat and would discourage high self-assessments. It is conceivable that a shareholder may be disadvantaged because he would prefer not to sell at a given price but also not wish to buy any more shares at that price.²¹¹ This feature is so similar to its counterpart in the self-assessment system for property tax determination that it need not be discussed any further.

It appears, then, that optimistic expectations and shareholder-specific concerns such as tax liabilities can be protected by a self-assessment system. Such a system is necessarily complex but does avoid the unpleasant aspects of a freezeout. On the other hand, the more this self-assessment system assists "desirable" acquisitions—in which the value of the target to the acquirer is greater than the sum of the internal valuations of the target's shareholders—the more the self-assessors must be put in the disadvantaged role of first assessor. One can use self-assessment, after all, only to compensate the forced sellers in the second step of the acquisition. All shareholders would be better off, so long as the acquirer goes ahead with the acquisition, and no shareholder would be frozen out at a price below his internal valuation. Acquisitions would become more expensive, however, and perhaps overdeterred. In response to this objection, the system might use self-assessment in lieu of the first step of the acquisition and allow the acquirer to buy shares at a price below the intended tender offer price. Some shareholders will then be worse off because their shares would have been bought at a price below that which they would have received in a tender offer. Those shareholders who, in the earlier example, valued their shares at eighteen dollars are disadvantaged by having to reveal their tastes before the chooser decides on the nature and extent of the acquisition.

A greater drawback to this self-assessment system is its use of such a complicated mechanism to guard against overassessment, that is, the requirement that the shareholders record their initial self-assessments. Unless an acquirer is willing to assert that it will not attempt a freezeout in the foreseeable future, every tender of-

²¹¹ See *supra* notes 195 & 199. The shareholder's portfolio and risk attitude may be such that he does not want to increase his position in *T*'s stock. It hardly would be fair in the context of the property tax, for example, to force a self-assessor to buy *another* identical home at a price equal to his self-assessment of his own home.

fer would entail substantial transacting costs as shareholders mailed in sealed self-assessments and the costs of alternative acquisitions were tallied. These costs must be multiplied when it is recognized that the number of market transactions in the target corporation's shares increases dramatically when a tender offer is announced; new owners continually appear. Moreover, the system must deal with shareholders who neglect to self-assess. There is no longer a first-step price to match, and the concept of a "statutory amount" is difficult to construct in this context.²¹² The high transacting costs that are encountered in the quest for a self-assessed freezeout derive from the system's requirement that *all* shareholders self-assess and report their valuations.²¹³ All of these self-assessments will be wasted if no freezeout materializes, and most will be wasted even if one does, because the majority necessarily will have already accepted the terms of the tender offer. Even if the acquirer is allowed to use the self-assessments as favorable purchase prices, the self-assessments may be wasted in the sense that a tender offer accomplishes much the same result with far less effort.

By way of comparison, the self-assessment system for tort damages wastes fewer resources. Its reliance on first-party insurance coverage is convenient because this insurance is itself useful, unlike sealed envelopes, and would have been purchased by many people even in the absence of a self-assessment system. Furthermore, a great many potential victims will be more than satisfied with the statutory amounts and will not resort to self-assessment by insurance with its associated transacting costs. Finally, accuracy aside, the administrative and court costs that accompany the current system of damage determination are so compelling and so easily saved

²¹² The system could deal with neglectful shareholders by using a "statutory premium percentage." See *supra* note 208. Thus, a nonassessing shareholder could be assumed to have assessed at an amount equal to 140% of market price.

²¹³ It is conceivable that this system be optional so that some shareholders self-assess while others remain able to pursue traditional remedies. Transacting costs would be saved because not every shareholder would need to fill out forms and send in sealed envelopes. Any such choice, however, raises the risk of adverse selection. Shareholders who are particularly risk-seeking or interested in outguessing may opt for self-assessment, while particularly litigious individuals may opt out and ready themselves for courtroom battles. Thus, the worst of both systems may result. Self-assessment would be inaccurate and transacting costs would not be reduced. For a similar argument concerning optional self-assessment for tort damages, see *supra* notes 124-26 and accompanying text.

by the proposed system that the cost of self-assessment is insignificant in comparison. The current system of appraising corporate stock, inaccurate as it may be, does not appear to be nearly so expensive. The Brudney-Chirelstein rule is virtually cost-free in the sense that, except perhaps for developments in the period between the tender offer and the freezeout, the successful tender offer price is simply matched.

The low transacting costs of the proposed system for allocating the property tax burden are particularly striking. Each property is institutionally appraised under the traditional system. The self-assessment system merely transfers this task both to people who are more familiar with the property's characteristics and to volunteers, thereby decreasing costs and improving accuracy. The analysis of transacting-cost savings in the division of a business owned by a small number of shareholders with no budget constraints is quite similar. Again, the alternative to self-assessment by a knowledgeable party is to use an outside appraiser who must first learn about the firm and its future prospects.

Self-assessed stock valuations in corporate freezeouts must be made attractive for their accuracy if, as seems clear, their ability to reduce transacting costs is unimpressive. Yet the system, as described, suffers somewhat from the same tendency toward inaccuracy—and therefore unreliable allocation of economic resources—as the Brudney-Chirelstein formulation requiring equal payments to dissenting shareholders. In announcing the self-assessed valuation and responding to a tender offer, each shareholder may be guessing the extent of his holdout power rather than assessing the internal value of his shares. Similarly, if self-assessment were to be used only in the freezeout stage of an acquisition, the system would suffer from the other problem discussed earlier: shareholders of the target would not tender and instead hope for a second step and a windfall payout of the amount they had “self-assessed.”

IV. CONCLUSION

Self-assessment is a powerful technique for determining the value of a property or interest. In different contexts it can lower the administrative costs of the legal system or increase the accuracy of valuations that are required—or both. The strengths and weaknesses of a self-assessment system can be evaluated only after

a particular system is designed carefully and then only by comparison to the characteristics of the conventional assessment system that it would replace. Of the self-assessment systems analyzed in this article, the one for tort compensation probably has the most promise, while that for complex stock valuations probably has the least. Self-assessment methods for property tax assessment can be adapted to meet a variety of goals and objections, but would first require a significant change in the common perception of what ought to be included in the tax base.

The technique of system design in all these cases was to have the individual most familiar with the possession or claim in question participate, sometimes exclusively, in its assessment. The major task, then, is to guard against a self-assessment that is more self-interested than honest. This proved to be a formidable task in the case of stock valuation because of a disinclination to force the self-assessor to purchase additional property at the self-assessed price. The tort system requires such a purchase, but it is a purchase of first-party insurance that can itself be useful and is not required of every potential injured party. Because the property tax system deals with a subject of continuing ownership rather than a taking or injury, use can be made of the prospect of forced sales of the property in question rather than forced purchases of additional property.

Although the development of self-assessment systems is primarily motivated by the desire for valuation accuracy, the tort and property tax systems proposed here are also able to effect substantial savings in administrative costs. The current court-administered assessment system for tort damages is particularly cumbersome and attempts to solve an almost hopelessly difficult problem of valuation. As such, it is the most attractive candidate for self-assessment. Presumably, the system could begin on a volunteer basis with courts continuing to determine damages for injured parties who had not previously elected to regard their insurance coverage as self-assessment. Alternatively, courts could begin to rely on evidence of first-party insurance as a self-assessment device that would be relevant in determining damages in an otherwise traditional trial.

Self-assessment is a simple concept already used, unwittingly

perhaps, in a variety of contexts.²¹⁴ This article has tried to explore

²¹⁴ The oldest and most remarkable self-assessment system developed in the admiralty rules of fifteenth and sixteenth century Northern Europe. When cargo was sacrificed at sea to save the vessel, the loss was apportioned among the master of the vessel and all the merchants with cargo on the vessel, according to the value of each of their interests. The difficulty in valuing the vessels—given their uniqueness and the absence of relevant market prices or valuation systems—was overcome by requiring each master to value his vessel upon arrival and then giving the merchants the option of acquiring the vessel at the stated price or using the self-assessed valuation for the contribution calculation. K. Selmer, *The Survival Of General Average* 46 & n.29 (1958) (referring to Hamburg law at the close of the fifteenth century and the Maritime Code of Fredrik II enacted in 1561).

Perhaps the most complete and time-honored self-assessment system is that used for balancing competition in horse racing. The great majority of thoroughbred races are "claiming races" and allow the owner of any horse run at a given meeting to purchase any horse in the claiming race at the announced price. For example, before the start of a \$20,000 claiming race, any owner may use the "claim box" and purchase a horse run in that race for \$20,000. Thus, an owner of a \$20,000 horse will not enter his horse in a \$10,000 claiming race in an attempt to win an easy purse (offered to the winner of a race). Apparently, about one horse a day (at a typical racetrack) changes ownership because of these "claims." J. Humphreys, *Racing Law* 313 (1963). It is hardly surprising that the claim must be made *before* the race starts. After all, self-assessment is attractive because an owner knows his horse's qualities better (less expensively) than would any institutional assessor (handicapper). Yet the owner obviously does not know the results of the day's claiming race before entering his horse in it. Thus, the guard against underassessment must be exercisable only before the race is run. The system is very much like the simple self-assessment system for property taxes. Although both systems contain a "disadvantage of the first assessor," this disadvantage is somewhat offset in the claiming race by the requirement that each forcing buyer have himself entered a horse that meeting and thus suffered his own disadvantage as a first assessor.

Interestingly enough, horse racing rules appear to be sensitive to the problem posed by idiosyncratic tastes. In "allowance races" the entering horses are not up for sale but are assigned carrying weights based upon previous experience and victories. Similarly, in handicap races, the nominees are not for sale, but in these races weights are assigned by an institutional assessor—the racing secretary. Invariably, allowance races are for better horses than are claiming races, and handicap races are for still better racehorses. For one thing, as horses run more races and are noted for their excellence they attract more attention, and the self-assessing owner does not have much more information than the institutional assessor. Furthermore, owners may be willing to enter their run-of-the-mill racehorses in claiming races but less anxious to part with the most carefully bred and coddled horses. These horses tug at the owner's idiosyncratic tastes, and the existence of allowance and handicap races may well reflect the disinclination to monetize and risk these tastes. Finally, as a practical matter there are very few top-notch horses in any one year, and a racing field of excellent horses may be difficult to assemble under the rules of a claiming race. For example, only one active horse in the country may be self-assessed at more than \$1 million, and if claiming races were the exclusive outlet this horse might never run a race. After all, in a \$1 million claiming race this horse's owner suffers the disadvantage of the first assessor, but his competitors enter horses of much lesser value and so—while all owners and horses try for the purse—only one owner really undertakes the disadvantage of the first assessor. For the ground rules of the various types of races, see K. Phifer, *Track Talk: An Introduction To Thoroughbred Horse Racing* 57-65 (1978).

its potentials and costs in several varying settings. The author hopes that this article will encourage others to improve upon the models suggested here, apply their principles to new areas, and reflect upon the often unnoticed characteristics of existing valuation systems.

