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Coase and the Courts: Economics for the Common Man

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INTRODUCTION

The arguments collectively known as the Coase Theorem were first presented by R.H. Coase, an economist,[1] in his 1960 paper entitled *The Problem of Social Cost*.[2] Based on the conclusions of that "theorem,"[3] Coase criticizes the prevailing judicial policy of resolving legal disputes on the basis that businesses should "internalize" costs, that is, bear the indirect social costs associated with the production of goods and services.[4] He argues the automatic application of this internalization policy often leads to economic inefficiency rather than to the maximization of efficiency, a goal which the judicial policy purports to promote. As an alternative, Coase claims that a different rule, one based on maximizing the total product of the parties to the dispute, would lead society closer to economic efficiency.[5]

Over the last twenty-five years, the Coase Theorem as well as Coase's policy recommendation (referred to here as the total product rule) have fostered considerable debate both in economics and legal literature. One controversy focuses on whether the Coase Theorem itself is valid; some critics claim that Coase's arguments are analytically faulty.[6] Another major

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1. Clifton R. Musser Professor of Economics Emeritus and Senior Fellow in Law and Economics, University of Chicago.

2. Coase, *The Problem of Social Cost*, 3 J. L. & ECON. 1 (1960).

3. Coase's conclusions are drawn from a conjecture argued by example and therefore do not technically constitute a theorem, *i.e.*, an assertion formed so that it can be rigorously proved or disproved. This is not to say that others have not attempted a more formal treatment of his conjecture. *See infra* note 6. Although Coase never refers to a "theorem" in his article, the appellation given to his discussion has been used by others. *See, e.g.*, E. MANSFIELD, MICROECONOMICS: THEORY & APPLICATION 477-80 (4th ed. 1982) (explaining Coase's argument); Cirace, *When Does Complete Copying of Copyrighted Works for Purposes Other than for Profit or Sale Constitute Fair Use? An Economic Analysis of the* Sony Betamax *and* Williams & Wilkins *cases*, 28 ST LOUIS U.L.J. 647, 673-81 (1984) (Coase Theorem used to argue that tax or subsidy system of video cassette recorders and their home use would result in misallocation of resources). This Article follows the convention of calling Coase's conclusions a "theorem."

4. Coase, *supra* note 2, at 1-2.

5. *Id.* at 34.

6. *See, e.g.*, Baker, *The Ideology of the Economic Analysis of Law*, 5 PHIL. & PUB. AFF. 3 (1975); Horwitz, *Law and Economics: Science or Politics?*, 8 HOFSTRA L. REV. 905 (1980); Kelman, *Choice and Utility*, 1979 WIS. L. REV. 769; Kennedy, *Cost-Benefit Analysis of Entitlement Problems: A Critique*, 33 STAN. L. REV. 387 (1981). For rigorous economic analyses questioning the validity of the Coase Theorem, see Aivazian & Callen, *The Coase Theorem and the Empty Core*, 24 J.L. &

point of controversy is a philosophical one. Because Coase's total product rule often operates to redistribute wealth from the less advantaged to the more advantaged, other critics assert that economic analysis itself is inconsistent with basic principles of fairness and equity and thus offers nothing to judicial decisionmaking.[7]

Despite these continuing disputes in the scholarly community over the validity and meaningfulness of Coase's approach (or perhaps because of these debates), the courts show a growing interest in Coase's arguments.[8] Furthermore, the judicial use of economic analysis in general is expanding, a trend fostered in part by law and economics programs in law schools, and by institutes that train judges and lawyers in the use of economic reasoning.[9] Therefore economic analysis will likely play a growing role in legal decisionmaking, and Coase will be an important influence in this development.

Although a plethora of articles consider the validity of Coase's theorem and the philosophical relevance of economic analysis in general, commentators have paid little attention to evaluating the economic correctness of Coase's policy recommendation.[10] In other words, assuming that the

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ECON. 175 (1981); Bramhall & Mills, *A Note on the Asymmetry Between Fees and Payments*, 2 WATER RESOURCES RES. 615 (1966); Kamien, Schwartz & Dolbear, *Asymmetry Between Bribes and Charges*, 2 WATER RESOURCES RES. 147 (1966); Tybout, *Pricing Pollution and Other Negative Externalities*, 3 BELL J. ECON. & MGMT. SCI. 252 (1972).

7. For instance, Mark Kelman comments:

> The real substantive vision of the Coase Theorem, its real cultural "contribution," is to a particular world picture that seems to me both a distorted "description" and a horrifying covert ideal. Once we can convince ourselves that we can picture people evaluating end-states abstracted from their social definition and that we can aspire only to create social institutions that then passively respond to these mysterious end-state judgments, we have moved much too far in the direction of resignation, despairing impotence, and (dare I say it) nihilistic skepticism about our capacity to grow.

Kelman, *Comment on Hoffman and Spitzer's* Experimental Law and Economics, 85 COLUM. L. REV. 1037, 1047 (1985). In a similiar vein, Lincoln Caplan reports:

> These critics say the law and economics movement ignores the complexity of human behavior in suggesting that society's main purpose is to maximize wealth. Even if that were true, say the critics, elevating this aspect of human behavior to the status of a legal principle promotes selfishness, not the orderly society that law seeks to encourage.

Caplan, *Does good economics make good law?* [sic], CALIF. LAW., May 1985, at 28, 30.

8. Since Coase's article, *The Problem of Social Cost*, was published in 1960, there have been 19 opinions citing the article. Seventeen of the opinions are discussed in part III of this Article. *See infra* text accompanying notes 119-269. The method used for discovering these opinions is discussed *infra* note 125.

Casual examination of the years in which these opinions were written reveals that the frequency with which courts cite to Coase is increasing with time. Two opinions cite *The Problem of Social Cost* in the first ten years after its publication (through 1970), six opinions cite it in the next ten years (through 1980), and ten opinions cite it in the six years from 1980 to the time of this study.

9. The University of Chicago, the University of Miami, and Emory University are some of the institutions noted for providing special programs for the study of law and economics. The Federal Judicial Center also now offers judges a one-week program patterned after the ones offered to jurists at the University of Miami and Emory University.

10. *See* R. POSNER, ECONOMIC ANALYSIS OF LAW 35 n.1 (2d ed. 1977) ("The article makes . . . other important points, which are sometimes overlooked, relating to the case in which the costs of transferring the property rights is so high that a voluntary transfer is not feasible."). The

Coase Theorem is valid, it is still questionable whether the application of Coase's total product rule does indeed promote greater economic efficiency.

In this Article, I demonstrate that the application of the total product rule does not promote economic efficiency any more than the prevailing judicial policies that incorporate the traditional principles of fairness and equity.[11] In fact, I show that Coase's total product rule serves primarily as a mechanism for redistributing wealth.[12] These efficiency and distributive implications also raise constitutional concerns relating to the taking of private property.[13] Although Coase implicitly claims that his approach does not contain value choices, an analysis of his methodology indicates that his theory does indeed mask one.[14]

Many writers suggest that economic analysis is itself so steeped in the values of Coase and his followers (the most notable of whom is Judge Richard Posner) that one cannot separate the two; thus these writers argue against the use of any economic reasoning in the resolution of disputes.[15] Their perception is, however, erroneous.[16] To the contrary, I will discuss the way value choices can and should be separated from economic reasoning.[17] Economic analysis by itself, unencumbered by value choices, can be an effective aid in analyzing the issues presented in legal disputes, clarifying when a value choice must be made, and identifying what choices are available.

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failure to discuss Coase's policy recommendation is often due to a failure to recognize that his policy is to serve when the conclusions of the theorem *do not* hold. Professor Farber, for example, appears to make this mistake when he argues that the problem with the Coase Theorem is that it has no real world applicability. *See* Farber, *The Case Against Brilliance*, 70 MINN. L. REV. 917, 918-20 (1986). His explanation, however, intuitively makes the necessary distinction by providing a novel insight into "transactions costs," a concern to which Coase's policy recommendation is addressed. For a brief description of Farber's point and for a discussion of transactions costs, see *infra* note 39 and accompanying text.

11. *See infra* text accompanying notes 58-68.

12. *See infra* text accompanying notes 69-83.

13. *See infra* text accompanying notes 84-102.

14. *See infra* text accompanying notes 103-18.

15. *See* Kelman, *Consumption Theory, Production Theory, and Ideology in the Coase Theorem*, 52 S. CAL. L. REV. 669, 678-98 (1979). As Lincoln Caplan notes:

> Stressing the uncertainties of cost-benefit calculations, the critics contend that "law and economics" uses the guise of "science" to justify substituting the value judgments of free-market economics for those of the law. In their most critical moments, they accuse Posner, especially, of cloaking radical, right-wing political opinions in the mantle of "law and economics."

Caplan, *supra* note 7, at 30.

16. Even though this perception is erroneous, it is not without cause. *See, e.g.*, Cohen, *Posnerian Jurisprudence and Economic Analysis of Law: The View from the Bench*, 133 U. PA. L. REV. 1117 (1985). Cohen, a J.D. and Ph.D. (Economics) candidate at University of Pennsylvania, critically evaluates the first three years of Posner's tenure as judge. Cohen finds that Posner not only uses economic analysis incorrectly, inappropriately, and incompletely, *see id.* at 1150-66, but he finds that Posner selectively uses it primarily to support Posner's conservative ideology, *see id.* at 1151. Since Posner is the most widely known, *see, e.g.*, Wall St. J., Aug. 4, 1986, at 1, col. 1, and probably the most widely read jurist who actively advocates the use of economic reasoning in resolving legal issues—his ECONOMIC ANALYSIS OF LAW (3rd. ed. 1986)(1st ed. 1973) was the first of its kind—it is not surprising that Posner's demonstration of the use of economic analysis in law has become synonymous with economic reasoning itself.

17. *See infra* text accompanying notes 119-269.

Indeed, case analyses of the opinions in which judges cite Coase's article[18] demonstrate that courts intuitively recognize this separation of economic analysis and value choices. Even when the courts appear to think that their decisions are economically determined, further probing shows that broader social policies are involved. This observation holds true even for Judge Posner, who is viewed as the leading exponent of economic determinism in legal decisionmaking.

I. THE ROAD TO ECONOMIC EFFICIENCY

A. Pigouvian Economics

The prevailing judicial philosophy for resolving legal disputes arising from the infliction of harm by the production of goods and services requires that businesses absorb all the costs associated with production.[19] While this approach is not the sole determinant of the results in many cases, the courts nonetheless use it as a factor in deciding liability. This judicial approach found support in the economic principle of internalization espoused by A.C. Pigou, a leading early twentieth century economist.[20]

Pigou argues that if firms did not pay for all the costs associated with their production, the market prices for their goods would not reflect the actual cost to society of the use of its resources. As a result, some goods would be underpriced while other goods would be overpriced. For example, suppose that in the course of production a firm pollutes an adjacent river which has the effect of increasing the costs of production to a farmer downstream. If the firm is not forced to pay for those increased costs, then the farmer must absorb them. Due to these higher costs the farmer will have to charge higher prices in order to produce the same level of output as he did before the pollution. Because of these higher prices, however, consumers will purchase less of the farmer's goods than they did previously. A new equilibrium for the farmer can be achieved only at higher prices and lower levels of production. At the same time, since the firm is not required to absorb its pollution costs, it will have lower costs of production and thus will be able to charge lower prices to produce the same level of output. Because of these lower prices consumers are willing to purchase more of the firm's goods. The firm's equilibrium will consist of lower prices and greater output when it does not pay for the pollution effects as compared with when it does.[21]

Pigou characterizes this phenomenon as a distortion of the marketplace and argues that this distortion is economically inefficient. He reasons that the value to the consumers of the firm's additional goods is less than its true costs, that is, the price the consumer is willing to pay is less than the

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18. *See id.*

19. This philosophy is most easily seen in the law of nuisance. *See* W. PROSSER & W. KEETON, PROSSER AND KEETON ON THE LAW OF TORTS 629 (5th ed. 1984) ("This is simply a decision that the harm thus intentionally inflicted should be regarded as a cost of doing the kind of business in which the defendant is engaged.").

20. A. PIGOU, THE ECONOMICS OF WELFARE (4th ed. 1932).

21. *See infra* note 22 for a graphical exposition of these arguments.

cost of using society's resources to produce them. Similarly, the value of the farm output that is no longer produced exceeds the true cost savings from not producing it, that is, the price the consumer is willing to pay for the additional products is greater than the cost to society in resources to produce them.[22] As a result, society's total utility, that is, the measure of

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22. Pigou's arguments are captured in the graphs, displayed below, that compare the market equilibrium when the firm bears the pollution cost with the market equilibrium when the farmer bears the cost. The demand curve for each product (labeled D) reflects the quantity of each product consumers are willing to purchase at various prices. The supply curve reflects the quantity of goods each producer (the firm and the farmer) is willing to supply at various prices. Each supply curve is based on the costs of producing various quantities of the respective product. Obviously, the supply curve shifts up (*i.e.*, the producer will demand higher prices for each quantity of output) if the producer bears the pollution costs on top of his other costs, and vice versa, if the producer does not.

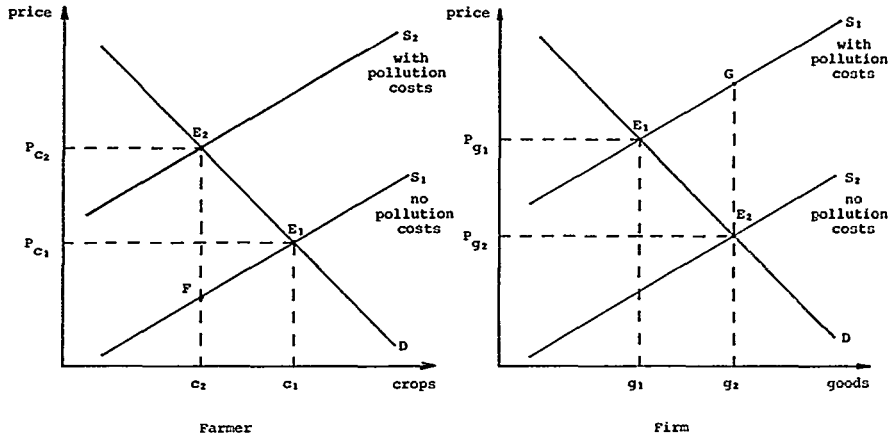

FIGURE 1

E_1 on the two graphs reflects the market equilibrium of the goods when the firm bears the costs of its pollution. In that instance, the farmer produces c_1 quantity of crops selling them at price P_{c1} The firm produces g_1 quantity of goods selling them at price P_{g1}.

If the farmer bears the cost of the pollution, his supply curve shifts up while the firm's supply curve shifts down. E_2 on the two graphs reflects the resulting market equilibrium in that instance indicating the corresponding quantity and price for each good.

Pigou's analysis measures the welfare loss resulting from the failure to force the firm to internalize its pollution cost by measuring the loss in welfare in moving from E_1 to E_2 in each market. A standard economics technique for measuring this loss graphically is the consumer surplus (or more specifically the sum of consumer plus producer surplus) approach. *See* H. VARIAN, MICROECONOMIC ANALYSIS 263-68, 276-84 (2d ed. 1984). This approach measures social welfare by the area under the demand curve subtracting the area under the supply curve. This sum captures the value to the consumers of the goods reflected in their willingness to pay for the goods—*i.e.*, the area under their demand curve) minus the cost to society of producing the good (the area under the supply curve). Thus, the sum is a measure of the increase in consumer welfare as a result of producing the goods.

Specifically for the firm-farmer example, in the farmer's market as a result of the drop in production from c_1 to c_2, the utility lost is measured by trapezoid $E_2 E_1 c_1 c_2$; the resource saved is measured by $FE_1c_1c_2$. The net social loss equals the difference, *i.e.*, triangle E_2FE_1. In the firm's market, as a result of the expansion of goods from g_1 to g_2, the utility

satisfaction consumers derive from goods, is reduced. Pigou argues that this reduction in satisfaction is economically inefficient.[23]

At the heart of Pigouvian analysis is the unstated assumption that what constitutes the true cost of production is known. Pigou implicitly assumes that the costs of pollution should be borne by the firm. This assumption is not unreasonable given that Pigou wrote in the context of an emerging industrialization intruding upon agrarian interests.[24] Looking neutrally at the firm-farmer example, however, uncovers no inherent reason to conclude that the firm's true cost includes the pollution effects on the farmer's production downstream. Certainly, if the farmer were not there, those costs would not exist.[25] The determination of the true costs depends on who has the entitlement, that is, who has the right to the use of the river. Only when that right is assigned does the true cost become known. The question of the assignment of the right is a legal question, one which can be resolved only by weighing those factors typically considered in

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gained is trapezoid $E_1E_2g_2g_1$ while the increased resource use is $g_1g_2GE_1$. The net loss equals triangle GE_2E_1 which when added to the loss in the farmer's market represents a decline in social welfare (and therefore is inefficient).

This analysis, however, has a number of problems. At a simple level, there is considerable double-counting. For example, the increased pollution costs resulting from the expansion of the firm's production from g_1 to g_2 is measured twice, once in the additional pollution costs the firm does not pay for and once in the reduction in output by the farmer from having to bear the pollution costs. This can be remedied easily by merely comparing the total consumer surplus under E_1 with the total consumer surplus under E_2. *A priori*, however, one cannot tell without empirical data which situation, E_1 or E_2, will result in a larger consumer surplus, leaving it ambiguous as to who should be assigned pollution costs.

More fundamentally though, even without the ambiguities, the consumer surplus approach has implicit in it value assumptions about the relative worth of different human beings. In particular, it tends to weigh wealthier people more heavily in the measure of social welfare than poorer people. *See* H. VARIAN, *supra*, at 206-09. At the heart of the problems of the consumer surplus approach is the difficulty of isolating the wealth distribution implications from the economic efficiency analysis. This difficulty is also a major concern of this Article. This problem is endemic to economic analysis and has been made more obscure by much of the writing in the legal arena by law and economics scholars. For an economic discussion of these particular problems in consumer surplus analysis, see generally Willig, *Consumer's Surplus Without Apology*, 66 AM. ECON. REV. 589 (1976). For recent efforts to grapple with the distributional implications of economic efficiency analysis, see the references cited *infra* notes 69, 108 & 118. Of course, the reader should not infer that Pigouvian analysis in particular is imbued with these problems. The Coasian approach is equally steeped in this difficulty, if not even more so. *See infra* text accompanying notes 69-83, 103-118.

23. Economists generally agree that a lowering of society's total utility is a result of economic inefficiency. For a discussion of the technical meaning of economic inefficiency, see *infra* note 33 and accompanying text.

For a more in-depth understanding of market distortion, true cost, and total utility, see A. ASIMAKOPULOS, AN INTRODUCTION TO ECONOMIC THEORY: MICROECONOMICS 434-36 (1978).

24. Although policies existed that limited these liabilities, *see* 31 S. HALSBURY, THE LAWS OF ENGLAND 474-75 (Lord Simons 3d ed. 1960) (railroad liability limited by statute), the underlying philosophy placed responsibility on the industrial enterprise. *See* W. PROSSER & W. KEETON, *supra* note 19, at 629.

25. Of course, in reality, pollution provides a wide variety of social costs other than the specific harm to the farmer downstream. However, in order to facilitate the reader's understanding of the nuances of externalities (*i.e.*, the noninternalized costs of production, such as pollution), I avoid the analytic complications introduced by multi-party victims and focus solely on the case when there is, at most, one party affected by the externality. Therefore, I assume (as economists are wont to do) that the impact of the pollution is limited to one party.

assigning property rights. While those factors may include economic considerations, that is not the same as economic considerations being dispositive. Pigou, however, implicitly assumes, without considering possible alternatives, that the entitlement belongs to the farmer. Thus, for Pigou, the issue as to how to determine true costs never arises.

B. Coase's Critique

Coase points to this latent assumption buried in Pigou's approach.[26] He argues that Pigou made it appear as if economic reasoning dictated the assignment of property rights, and thus who should bear the indirect social costs.[27] Coase argues that economic analysis does not lead inexorably to the choice of one assignment over the other. Coase contends that, to the contrary, economic analysis tells us that it is irrelevant to whom the property assignment is made. Ultimately no party will adjust production levels to accomodate obligations to bear the indirect costs. Disagreeing with Pigouvian analysis, Coase claims to prove that no market distortion occurs, with or without internalization, and therefore no economic efficiency issues ensue.[28]

Coase argues that market distortions do not exist because all parties would maintain the same level of production regardless of which party is forced to bear the indirect costs.[29] No matter who is assigned the right, the party without the right will pay the other party to restrain the exercise of that right. Furthermore, either party will pay just enough so that the output of goods and pollution by both parties will be the same regardless of who pays. For example, suppose a paper mill pollutes a river in proportion to its level of paper production. Suppose further that the level of crop production of a downstream crop farmer varies with the level of pollution in the river. If the firm bears liability for pollution costs, the firm will offer to compensate the farmer for any crop damage in exchange for permission to pollute to some degree, so long as the necessary compensation is less than the value of the increased paper production to the firm. Under such circumstances, the farmer should agree to accept the offer since he is fully compensated for any crop loss. Conversely, under the same scenario, if the farmer must bear the pollution costs, the farmer will pay the firm to restrain its pollution by compensating the firm for the reduction in its output, so long as the necessary compensation to the firm is less than the increased value of the crops that results from the restrained pollution. Given that one or the other party (*i.e.*, firm or farmer) must bear the costs of pollution, Coase argues that the output of each party will remain the same, regardless of who bears the costs.[30] According to Coase, the optimal output for both

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26. Coase, *supra* note 2, at 34; *see also id.* at 12-15 (illustrating this assumption).
27. *Id.* at 13, 28-34.
28. *Id.* at 1-8.
29. *Id.* at 6, 8.
30. For a numerical example that elucidates his point, see *infra* note 31. Probably the most important point that tends to escape readers and writers in the area is that the optimal output for each of the two parties, *given* the presence of a pollution problem, indeed differs from the optimal output for each party alone if the party did not have a pollution problem with which to contend. (Even Coase fails to distinguish between these differing optimal states in his

parties is determined by the relative market values of the parties' products, values not affected by the assignment of liability.[31]

numerical example to support the total product rule. *See infra* note 50.) This change in the optimal level of production that results from the introduction of pollution is not to be confused with Coase's assertions that the optimal level of production remains unchanged by liability assignment. Coase's argument is that once the parties must operate within the framework of pollution, each party's optimal output level *in that framework* is not affected by which party is the one legally obligated to bear the pollution costs. For a discussion of the importance of distinguishing between economic conditions before and after the introduction of pollution, see Baker, *Starting Points in Economic Analysis of Law*, 8 HOFSTRA L. REV. 939, 950-53 (1981).

31. *See* Coase, *supra* note 2, at 6, 8. The following numerical example, a modification of Coase's own, *see id.* at 3-6, should clarify Coase's arguments.

Assume the farmer's acre adjacent to the river produces 20 bushels of crops when there is no pollution. Assume that the cost of producing those crops is $10 and that the crops sell at $1 per bushel. This yields the farmer a revenue of $20 and a profit of $10.

Assume that the paper mill sells its output at $5 per pound and that its costs of production for different levels of output (absent any pollution considerations) are as indicated in Table I. The total profits are calculated by subtracting costs of production from revenue (pounds multiplied by $5).

Table I Paper

Pounds	Revenues	Costs	Total Profit
0	0	0	0
1	$ 5	$ 1	$ 4
2	$10	$ 3	$ 7
3	$15	$ 6	$ 9
4	$20	$10	$10
5	$25	$15	$10
6	$30	$21	$ 9

Clearly, absent any pollution considerations, the maximum possible profit is $10, achievable by producing either 4 or 5 pounds of paper. For convenience, assume the firm would produce 4 pounds.

The impact of pollution can then be analyzed by demonstrating what happens to the farmer's crops when the paper mill is operating upstream. Assume that the level of crop damage depends on the number of pounds of paper (and therefore the quantity of pollution) produced, as represented in Table II.

Table II

	Paper		Crops	
Pounds	Total Profit	Amount of Change in Profit	Bushels Remaining	Change in Revenues (Damage)
0	0	-	20	-
1	4	4	19	1
2	7	3	17	2
3	9	2	14	3
4	10	1	10	4
5	10	0	5	5
6	9	-1	0	5

If the paper mill closed down, the farmer's acre would still produce 20 bushels of crops; if the mill produced 3 pounds of paper, 6 bushels of crops would be destroyed, leaving 14 bushels for sale, and if 5 pounds of paper were produced, 15 bushels would be destroyed leaving 5 bushels for sale. The legal issue is who bears the pollution cost: the firm or the farmer? Coase asserts that from an economic perspective it does not matter because the parties' production decision in response to the pollution will be the same regardless of how the court decides.

To understand Coase's argument, first compare the two parties' output decision when the firm is held liable with their decision when the farmer bears the cost (*i.e.*, the firm is found not liable). If the firm is liable it must compensate the farmer with $1 for every bushel lost. The firm examines the net impact of expanding its production one pound at a time. If the additional pound adds more in increased profit than in increased liability the firm will expand

Having argued that no market distortion can occur, Coase also claims that his analysis demonstrates that the parties themselves, through negotiations, would automatically reach the economically efficient level of output.[32] By definition, society achieves economic efficiency when it reaches a state in which no further redistribution of resources and goods can be made that will make one individual better off without making another individual worse off.[33] Since both the farmer and the firm have attained their optimal profit maximizing level of output, given the existence of pollution, neither one can improve its own situation without making the other worse off. Coase reasons that since the parties cannot further redistribute between themselves in order to make an unambiguous improvement, they therefore also have made an unambiguous improvement for society as a whole.[34] In other words, Coase concludes that because the parties have satisfied the criterion of economic efficiency between themselves (that is, they have each achieved their optimal output levels given the presence of the other), they have, as a consequence, brought society closer to economic efficiency.

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its production. For example, the firm should increase its output at least from 0 to 1, because it will gain $4 in profits and pay only $1 in liability, and from 1 to 2 ($3 of added profit and only $2 added liability). It should not expand production, however, from 2 to 3 pounds because there the added profits ($2) are less than the added liability ($3). Thus, the optimal output decision for the firm is to produce 2 pounds of paper, leaving the farmer with 17 bushels of crops to sell.

If the farmer must bear the cost of pollution (*i.e.*, the firm is found not liable), then the farmer must consider whether it is worthwhile to pay the firm to restrain its production. If the farmer does not pay anything, the firm's optimal output, since it is not liable for the pollution, is 4 pounds for $10 profit—the output it would choose absent pollution considerations. In order to reduce the firm's planned output (and thereby its pollution), the farmer must pay the forgone profit from each pound of output the firm does not produce. The farmer compares this payment with the increased revenue he would receive from the resulting increase in the remaining crops. If the increased revenue from a pound reduction exceeds the payment for the forgone profit, the farmer will pay the firm to reduce its planned output. Thus, in the case here, the farmer will pay the firm to reduce its output from 4 to 3 since the farmer has to pay the firm $1 and the farmer's revenues increase, as a result, by $4. Similarly, the farmer is willing to pay the firm the necessary $2 to reduce its output from 3 to 2, since the farmer's increased crops yield $3 of additional revenue. The farmer, however, will not be willing to pay the firm to reduce its output to 1 because the necessary payment of $3 exceeds the $2 value of the increased crops. Thus, the optimal decision for the farmer is to let the firm produce 2 units of output leaving the farmer with 17 bushels to sell. This is exactly the same outcome as in the scenario where the firm was held liable, which is Coase's assertion.

32. *Id.* at 6.

33. This definition of economic efficiency is commonly referred to as satisfying the conditions for Pareto Optimality. Intuitively, one can understand the desirability of this condition by considering the implications of not satisfying it. If the condition was not satisfied, then the current distribution of goods and resources is such that it is possible to redistribute those goods so as to make at least one person better off while no one else is made any worse off. Clearly an improvement in the well-being of one member of society at no expense to any other member constitutes an unambiguous improvement in society overall. Failure to undertake that improvement is, by economists' standards, inefficient. When society has satisfied the Pareto Optimality definition of economic efficiency, all such opportunities for improving people's welfare have been taken advantage of, and there are no more such improvements that can be made. Pareto Optimality, however, does not include or address the issue of redistributing wealth in the favor of some to the disadvantage of others, for example, from the rich to the poor. That is a separate issue, one that does not conflict with economic efficiency. *See infra* notes 103-10 and accompanying text. For an expanded discussion of Pareto Optimality, see E. MANSFIELD, *supra* note 3, at 440-44.

34. Coase, *supra* note 2, at 6-8.

Coase's analysis leading to his conclusion—that the assignment of property rights is irrelevant to economic efficiency—is generally referred to as the Coase Theorem.[35] Based on these arguments, Coase in effect declares Pigouvian analysis irrelevant to achieving economic efficiency, and therefore not useful for the resolution of legal disputes. Having disposed of Pigou's policy recommendation of internalization, Coase then turns to his own policy recommendation, to be used in those circumstances in which the court's property right assignment can be used to promote economic efficiency.[36] Coase's policy is referred to here as the total product rule.

C. Coase's Total Product Rule

Although Coase concludes that parties affected by externalities (*i.e.*, indirect social costs such as pollution) produce the same levels of output regardless of who is required to bear those social costs, he says that this conclusion holds true only if no impediments to the bargaining process exist.[37] In reality, the process of negotiation itself may bar an efficient outcome. Complexities, such as the gathering of complete information, the inclusion of all relevant parties, and the effort to ensure adherence to all agreed terms, are costly.[38] Labeling these complexities *market transactions costs*[39] (subsequently shortened by other writers to *transactions costs*),[40] Coase argues that they limit negotiations to those instances in which the increased value resulting from the exchanged rights exceeds the transactions costs. In some cases, the transactions costs may be so high that they prohibit any negotiations, no matter how mutually profitable the negotiations would be in the absence of transactions costs.[41] Therefore, Coase asserts that courts, when ruling on entitlement disputes, must assign the property right not on the basis of traditional notions of property rights, but on the basis of maximizing total product.[42] Furthermore, he argues that economists

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35. *See supra* note 3.
36. Coase, *supra* note 2, at 33.
37. *Id.* at 15.
38. *Id.*
39. *Id.* Professor Farber points to a potentially more fundamental barrier to negotiations: the lack of necessary understanding and perception on the part of the parties. *See* Farber, *supra* note 10, at 919. Though Professor Farber does not express it in these terms, in fact what he suggests is truly an example of "transactions costs."
40. *See, e.g.*, Calabresi, *Transaction Costs, Resource Allocation and Liability Rules—A Comment*, 11 J.L. & ECON. 67, 68 n.5 (1968); Ellickson, *Of Coase and Cattle: Dispute Resolution Among Neighbors in Shasta County*, 38 STAN. L. REV. 623, 624 (1986); Vogel, *The Coase Theorem and California Animal Trespass Law*, 16 J. LEGAL STUD. 149, 149 (1987).
41. Coase, *supra* note 2, at 15.
42. Coase states:

> In these conditions the initial delimitation of legal rights does have an effect on the efficiency with which the economic system operates. One arrangement of rights may bring about a greater value of production than any other. But unless this is the arrangement of rights established by the legal system, the costs of reaching the same result by altering and combining rights through the market may be so great that this optimal arrangement of rights, and the greater value of production which it would bring, may never be achieved.

Id. at 16.

should advocate this approach rather than Pigou's internalization policy.[43]

Coase does not provide a coherent formula or methodology that would allow courts to determine how property rights should be assigned to maximize total product.[44] Instead he gives a numerical example in which a court, by resting its decision solely on traditional property rules, would drive a socially useful enterprise out of business.[45] The following scenario best captures Coase's concern for the inefficiencies created by market transactions costs and the role that property right assignments can play. It is based on a fact pattern originally put forth by Pigou to demonstrate his internalization policies. Coase chooses the same fact pattern for his own numerical example[46] and many writers have used it over the years as a paradigm to convey the essence of the problem of transactions costs.[47]

The example, based on a nineteenth century concern, involves the impact of railroad expansion on farmers. The railroad operations cast off sparks that cause damage to crops grown on land adjacent to the tracks. If the railroad is held liable for the damage and no barriers inhibit negotiations between it and the farmers, then the railroad could relieve itself of liability by compensating the farmers in advance of the growing season for the forgone profits associated with the expected crop damage. Each farmer should be willing to accept this offer since he would be in the same position with the railroad's payment as he would be raising the crops and selling them for a profit. The economic outcome will be that the railroad runs its trains and the farmers choose not to grow crops on the adjacent land. However, in the presence of transactions costs—which, in this case, arise from the fact that the railroad must negotiate with thousands of farmers—the railroad cannot feasibly take advantage of negotiations in advance of the growing season. Thus, as the damage occurs, farmers sue the railroad, which must then pay for the harm. Because the railroad's liability, in this case, is the market value of the damaged crops (which includes not only the profits of the crops but also the cost of planting the crops), the liability can easily exceed the farmers' forgone profits the railroad would have paid had it been able to negotiate with each farmer individually and in advance.[48] Under extreme circumstances, the increased liability could be sufficiently large to drive the railroad out of business; whereas, if advance negotiations had been possible, the railroad operations would have been profitable.[49]

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43. "When an economist is comparing alternative social arrangements, the proper procedure is to compare the total social product yielded by these different arrangements." *Id.* at 34.

44. For a similar point, see Cooter, *The Cost of Coase*, 11 J. LEGAL STUD. 1 (1982).

45. Coase, *supra* note 2, at 32-34.

46. *Id.*

47. *See* Cooter, *supra* note 44, at 2; Posner, *Strict Liability: A Comment*, 2 J. LEGAL STUD. 205 *passim* (1973); Sullivan, *Breaking Up the Treble Play: Attacks on the Private Treble Damage Antitrust Action*, 14 SETON HALL L. REV. 17, 27-28 nn.58 & 60-61 (1983).

48. Whether the advance payment of forgone profits in exchange for leaving the adjacent land untilled is less than paying for the market price of damaged crops after they have been grown depends on what percentage of the crop will be destroyed by the sparks. The assumption here is that the damage is so great that the railroad will prefer to pay in advance.

49. Assume that the railroad performs services worth $250 per year and the cost of running the trains is $100 per year. Assume further that farmers collectively grow $200 worth of crops each year on land adjacent to the track at a cost to them of $125 per year. Finally, assume that the railroad causes $175 worth of damage to the crops if they are grown there.

Under these circumstances Coase would argue that it is imperative for the courts not to hold the railroad liable; for, as he says in his own example,[50] the loss of railroad service would be a tremendous loss to society. Furthermore, if the railroad were assigned the right to cast sparks, the economic outcome would mirror more closely what would have occurred if there had been no transactions costs: that is, the farmers would choose not to grow on acres where their crops would be damaged, and the railroad would run its trains.[51]

The inexorable lesson appears to be that the court should ignore the traditional basis for resolving property disputes. The scenario calls for the railroad to be held free of liability and indeed, a decision the other way seems in retrospect to be a foolish impediment to economic prosperity. This example, along with others, serves to point to the need to apply the total product rule for property assignments. But Coase's failure to provide a systematic method to determine how to assign property rights so as to maximize total product and assure an appropriate application of his rule led his followers to develop criteria which the courts could use.

Then the following facts are true:

	Revenue	Costs	Profits	Crop Damage from trains:
Farmers	$200	$125	$ 75	$175
Railroad	$250	$100	$150	

If the railroad negotiates with the farmers in advance, it merely needs to pay them $75 to compensate for the forgone profits from not planting. The railroad is willing to do this because it earns a profit of $150 from its enterprise. After the payment of $75 to the farmers, it still has a remaining profit of $75 for itself. If the railroad is not able to negotiate in advance, the farmers grow the crops, $175 of which is damaged by the trains each year. If the railroad is forced to pay this, the amount exceeds its profit of $150 and the railroad will choose, instead, to go out of business.

50. One reason, among others, that Coase's own numerical example and analysis is not used here is that it does not involve transactions costs. This is surprising, of course, considering the emphasis Coase places on market transactions costs, not only in his paper in general, *see* Coase, *supra* note 2, at 15-30, but also in his discussion introducing his numerical example: "The problem is whether it would be desirable to make the railway liable in conditions in which it is too expensive for such bargains to be made," *id.* at 31. Furthermore, the other problems with Coase's analysis of his particular numbers are beyond the scope of this Article. For a brief discussion of some of these problems, see Zerbe, *The Problem of Social Cost in Retrospect*, 2 RES. L. & ECON. 83, 91-93 (1980).

The scenario presented in the text, in contrast, does capture the essence of the transactions costs problem that Coase so aptly raises and discusses. It shows the economically efficient outcome that would occur absent transactions costs (the railroad purchases from the farmers the right to cast sparks, the farmers do not grow crops, and the trains run) and it shows how the presence of transactions costs drives the railroad out of business—an inefficient and undesirable result. It also shows how the reassignment of rights can remedy the problem. Implicitly, this perspective of the transactions costs problem has been adopted by subsequent writers addressing the issue. See, most notably, Posner's policy recommendation to assign the right to the party who would have purchased it absent transactions costs, discussed *infra* text accompanying notes 52-57, and G. Calabresi's alternative, which is to assign the liability to the party who would have purchased the right, discussed *infra* text accompanying notes 259-69.

51. *See* Coase, *supra* note 2, at 33. Of course, the most salient difference under the right assignment is that the railroad receives the right to cast sparks without paying for them.

D. A Total Product Rule According to Posner

While many writers have developed methods for applying a rule to maximize total product in a courtroom situation,[52] the most influential Coase supporter in this area has been Judge Richard A. Posner.[53] His product rule criterion states that the courts should assign property rights to the party who, in the absence of transactions costs, would have purchased the rights from the other party if the rights had been awarded to that other party.[54] In other words, he suggests assigning the property right to the party who "values" it more, inferring from economic arguments that this party uses the right more "efficiently" or at least adds more to total product.[55]

The railroad hypothetical can serve to illustrate Posner's arguments. Suppose there are no transactions costs, *e.g.*, there is one adjacent farmer and that farmer owns the property right of not having sparks damage his crops. Assuming the railroad values the right to cast sparks more than the farmer values having his crops remain undamaged, it can be shown that the railroad will end up with the right to cast sparks regardless of whether the farmer or the railroad initially owns the right. If the farmer initially owns the right, then because the railroad values the right more, the railroad will be willing and able to purchase the right from the farmer by offering to pay for the farmer's forgone profits. If the railroad initially holds the right, the farmer's lesser value of the right leaves the farmer unwilling to offer a sum sufficiently large to induce the railroad to sell the right. Therefore, regardless of the initial right holder's identity, the railroad will ultimately own the right either through purchase or award.

Fundamentally, the railroad obtains the right regardless of the initial assignment because the railroad derives more economic benefit from the right. The railroad derives more economic benefit because society is willing to pay more for the services the railroad produces with that right (*i.e.*, train services) than society is willing to pay for the farmer's production with that right (*i.e.*, the profits of the crops). That is proof, Posner says, that the railroad contributes more to total product and is therefore the more efficient user of the right.[56] Since the more efficient user of the right is the party who, absent transactions costs, would purchase it from the other party (if the right were initially assigned to that other party), Posner asserts that the party's incentive to purchase the right should be dispositive in deciding property disputes.

Thus, when transactions costs bar the railroad's negotiations with

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52. *See generally* Calabresi & Melamed, *Property Rules, Liability Rules and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089 (1972); Dales, *Land, Water, and Ownership*, 1 CAN. J. ECON. 791 (1968); Mishan, *Pareto Optimality and the Law*, 19 OXFORD ECON. PAPERS (n.s.) 255 (1967); Polinsky, *Resolving Nuisance Disputes: The Simple Economics of Injunctive and Damage Remedies*, 32 STAN. L. REV. 1075 (1980).

53. U.S. Court of Appeals for the Seventh Circuit; Senior Lecturer (formerly Lee and Brena Freeman Professor), University of Chicago Law School.

54. R. POSNER, ECONOMIC ANALYSIS OF LAW 45 (3d ed. 1986).

55. *Id.*

56. *See id.* at 42-43.

adjacent land owners, *e.g.*, when the sheer number of adjacent land owners makes it difficult for the railroad to negotiate with all of them in advance, the railroad and the farmers are likely to litigate the railroad's liability for crop damage. Posner reasons that in order to overcome any barriers created by the transactions costs that prevent the railroad from purchasing the right, the court should assign the right to the railroad directly, regardless of the result dictated by traditional property rules. Therefore, the railroad should be made free of liability for the crop damage on the basis that the railroad would have purchased the rights from the farmers in advance (if the railroad did not already own them) had there been no transaction costs to bar the negotiations. Since that fact proves that between the two parties the railroad is the more efficient user of the right, Posner argues that such an assignment will maximize total product.[57] Posner's articulation of these standards for invocation and application of the total product rule provided needed guidelines missing in Coase's original article.

II. A Critique of the Total Product Rule

A. Economic Efficiency

Careful scrutiny of the Coase-Posner total product rule approach indicates that application of the total product rule does not promote economic efficiency to any greater extent than do traditional property rules. In fact, the total product rule is just as likely as traditional property rules to lessen economic efficiency as it is to enhance it. Furthermore, the application of the total product rule will serve as a means of redistributing wealth, most frequently from the less to the more economically advantaged.

Recall that Coase subscribes to the total product rule because he thinks it is necessary to promote economic efficiency by assigning property rights to the more efficient user and thereby increasing the total productivity of the two parties.[58] Coase implicitly assumes that increased economic efficiency between the two parties would automatically increase efficiency for society as a whole. The linchpin of Coase's policy is the increase in the total product of the two parties that purportedly results from assigning the right to the party who will use it more efficiently. If Coase's policy recommendation is correct, then every application of his total product rule should result in increased efficiency. In fact, however, that does not happen; indeed, the application of the rule can simply result in a different source of inefficiency.

Without transactions costs, the two parties bargain to distribute the right between them in the most economically efficient manner. In other words, as a result of negotiations, one party will not necessarily get the exclusive use of the right, but may simply reduce the extent of its use, permitting both parties to exercise the right to some degree. In contrast, in a property dispute in which transactions costs bar negotiations, even though a court must assign the property right to one or the other party, no

57. R. Posner, Economic Analysis of Law 18 (1st ed. 1973); Posner, *supra* note 47, *passim*.
58. *See* Coase, *supra* note 2, at 34, discussed *supra* text accompanying notes 37-51.

(or limited) negotiations can take place. The parties will thus be unable to negotiate to share the use of the property right and reach their optimal levels of output. The result is that the party getting the award will tend to overproduce due to unrestrained exercise of the right, while the other party will underproduce because of interferences with its production process. Transactions costs prevent the losing party from purchasing a share of the right or paying the winning party to cut back its use. Inefficiency results regardless of who receives the property right. Therefore, the court's efficiency concern narrows to which assignment will cause less inefficiency. The Coase-Posner rule suggests that the property right should be assigned to the party that contributes more to the total product of society.[59] That assignment, however, will not necessarily be to the party which uses the right less inefficiently.

The following example demonstrates that the total product rule will not necessarily improve efficiency. Suppose that one party's use of the right interferes minimally with the other party's operations, but the other party's use of the right substantially or totally interferes with the first party's operations. Thus, in the firm-farmer hypothetical,[60] the farmer's right to pollution-free water may only be a minor interference to the firm, whereas the firm's production may destroy most of the farmer's crops. If the firm contributes more to total product, the total product rule would call for the assignment to the firm—even though the assignment of the right would result in almost total destruction of the farmer's crops. This is less efficient than if the award of the right were made to the farmer. In the latter case the firm would have to keep a pollution-free river, which would affect the firm only slightly. The farmer could produce everything that would be profitable to produce and the firm could produce nearly everything, making an assignment to the farmer a more efficient outcome.

Viewing the same analysis from another perspective, assume that when no transactions costs exist, the optimal allocation of the right occurs when the farmer uses ninety percent of the right and the firm uses ten percent. If, in the presence of transactions costs, a court assigns the right to the firm on the grounds that the firm contributes more to total product, and given that no negotiations can take place, then the firm will use one hundred percent of the right instead of the optimal ten percent. This outcome is clearly and significantly less efficient than an award made to the farmer that permits the farmer to use one hundred percent of the right instead of the optimal ninety percent.[61] Thus, awarding the right to the

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59. "The law can resolve incompatible uses either by recognizing a property right in the party whose use is the more valuable or by imposing liability on the other party." R. POSNER, *supra* note 10, at 39.

60. *See supra* note 31 and accompanying text.

61. Suppose that the firm, which is the more efficient user of the right to pollute 10% of the river, produces $100 per week of paper with the use of that right. Assume this costs the farmer a decrease in crop value of $20. Furthermore, assume that if the firm pollutes the river unabatedly, *i.e.*, a 100% pollution level, its total product will increase $200, but the farmer's crop value will decrease $300. The optimal outcome, *absent transactions costs*, calls for the firm to purchase from the farmer (if the farmer owns the right) the right to pollute at a 10% level. The firm is clearly willing to do so since it values the 10% right at $100, as compared with the farmer's value of $20. The firm is clearly the more efficient user of that much of the right and

party that contributes more to total product does not *always* lead to greater economic efficiency between the two parties.

Coase's omission of specific guidelines to maximize total product is not the sole reason for his policy's failure to ensure improved efficiency. Similar problems result when using Posner's criteria for assigning the property right. Posner would assign the property right to the party who, absent transactions costs, would purchase it from the other party. The willingness to purchase the right, Posner argues, indicates that the party values it more and would thus contribute more to total product.[62] As a way of illustrating the difficulties with Posner's rule, consider a situation in which the respective transactions costs of the two parties differ.

Suppose, in the railroad-farmer hypothetical,[63] that the farmer's transactions costs for initiating negotiations exceed the railroad's transactions costs for initiating negotiations. If the railroad is not liable for the damage caused by its sparks, then, absent transactions costs, the farmers will collectively offer to compensate the railroad to reduce the number of trains run to the efficient number. Each farmer contributes a share to the compensation that reflects the gain to the farmer of a reduction in the number of trains run. In the aggregate, the collective shares sufficiently compensate the railroad to induce a reduction to the socially optimal number of trains. In reality, however, farmers operating collectively incur extremely high transactions costs, thereby reducing the number of farmers who participate and reducing the amount of compensation the railroad receives. As a result, the railroad reduces the number of trains running by less than the social optimum. The greater the transactions costs of collective action on the part of the farmers, the less negotiation undertaken and as a result the more remote the actual outcome is from efficiency.

On the other hand, if the railroad *is* liable for the sparks damage, then, absent transactions costs, the railroad compensates the farmers for their forgone profits and the railroad schedules the same number of trains that it would when it is not liable. The liability rule affects the outcome, however, when the impact of transactions costs are considered. In this case, the transactions costs to the railroad of negotiating with the farmers is comparatively small (*e.g.*, as each owner files a complaint, the railroad pays for the damage for that period and then negotiates to pay the forgone profits in the future). Thus, due to its lower transactions costs, the railroad, by being held liable, achieves an outcome significantly closer to efficiency than if it were not liable. But under Posner's assignment rule, since the railroad would purchase the right if not assigned it (absent transactions costs) it would not be held liable. As a result, Posner's assignment rule actually chooses the option that leads to less efficiency and lower total

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contributes more to total product. However, under the total product rule, when transactions costs bar these negotiations, the "right to pollute" would be awarded to the firm. Since the largest increase in the firm's product is with a 100% pollution level, that is clearly what the firm would do if awarded the right. This results in a less efficient outcome than if the pollution rights were assigned to the farmer.

62. *See supra* text accompanying notes 52-57.

63. *See supra* text accompanying notes 46-51.

product—in contradiction of Coase's total product rule.[64] Therefore, under either Coase or Posner's guidelines the total product rule does not guarantee, even as between the two parties, an assignment of property rights that will bring the parties as close as possible to economic efficiency.

Furthermore, even if criteria could be developed that would assure consistent assignments of property rights so that the parties could achieve, as close as possible, their optimal use of the right and produce their optimal output, this attempt to maximize the efficiency of the two parties would not ensure that society's efficiency, as a whole, would be improved. This is because changes in the market for any given product reverberate throughout the economy. Assume, for example, that in the firm-farmer hypothetical,[65] the parties are in court, seeking the award of the property right with respect to pollution in the river. Assume further that significant transactions costs prohibit negotiations between the parties concerning the allocation of that right. The court's assignment of the property right will determine what output the two parties will ultimately produce. If the assignment is made to the firm, the firm will overproduce and the farmer will underproduce. If the assignment is made to the farmer the opposite will result. If the firm is given the assignment and overproduces, this will tend to lower the price for the paper it produces. Therefore consumers will tend to buy more paper and less of other goods. This change in consumption will affect the total product of society in some way. The same will be true if the assignment is given to the farmer, causing the firm to underproduce. This would raise the price of paper, causing consumers to buy more of other goods. This also affects the total product of society. This effect occurs whether or not the assignment is such that the two parties to the dispute end up, between themselves, as close as possible to efficiency.

Without full and complete data about the effects throughout the economy, one cannot predict *a priori* which assignment results in the greatest total product. In fact, the aggregate effect cannot be predicted by any general economic rule. The only way to determine whether a particular right assignment generates a net gain or loss over alternative assignments is to engage in an extensive data analysis not only of the disputing parties but also of all the potential reverberations throughout the economy—an undertaking usually beyond the scope of most courts.[66] *Since the ultimate economic outcome of an assignment rule based on Coasian total product analysis is unpredictable, the assignment rule itself is not logically justified on economic efficiency grounds.* Furthermore, as a corollary, *an assignment based on rules of equity and property is,* a priori, *just as likely to create the greatest net gain (or loss) in aggregate total product as one based on a total product analysis of the disputing parties.*

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64. For analyses suggesting that liability (and not the property right) should be assigned to the party with the lowest transactions costs, see Mishan, *supra* note 52, at 267-69, and Randall, *Market Solutions to Externality Problems: Theory and Practice*, 54 AM. J. AGRIC. ECON. 175, 178 (1972).

65. *See supra* note 31 and accompanying text.

66. Gunther, *Forward*, 86 HARV. L. REV. 1, 23-24 (1972) (discussing inability of courts to address some kinds of social and economic problems "because the data are exceedingly technical and complex").

In the example above, it was assumed that the assignment of the right would not lead the two parties to their optimal outcome. Instead, they would merely move as close as possible to that point. This assumption does not, however, affect the conclusion that the assignment of the property right according to a total product rule does not assure an improvement in societal efficiency. Even if the rules could be designed to guarantee the optimal outcome between the disputing parties, applying the rules still does not ensure that society's (economic) welfare has improved overall.

Economists have demonstrated rigorously that when constraints on efficiency (such as transactions costs barring negotiations) exist throughout the economy, applying policies to induce efficiency between *some* of the parties is not necessarily or even likely to be an economic improvement for society as a whole.[67] Indeed, it is possible that permitting fewer parties to be efficient is economically superior to making many (but not all) parties efficient. Therefore, applying policies to bring as many parties as possible to economic efficiency may not lead to the greatest total product for society.

When many parties in society are constrained from achieving an economically efficient outcome, bringing only some of those parties to their economically efficient outcome will have a ripple effect on other parties in society. Once again, without exhaustive data, the courts cannot know in advance whether the increase in total product that results from the disputing parties being made efficient will be offset by a lessening of total product for other parties that stems from this maximization process.

Formalized as the Theory of the Second Best,[68] the analysis proves that the intuition—that it is economically superior to achieve as many efficient conditions as possible—is wrong. It is true that society achieves a maximum total product when all markets are efficient *simultaneously*. But as the Theory of the Second Best demonstrates, once the economy in fact departs from this ideal, the second best solution does not consist of myopically evaluating each individual dispute for the purpose of maximizing efficiency between the two parties as a way of maximizing total product for society. This, however, is precisely what the Coasian analysis suggests for public policy. Even when the Coasian analysis can (if ever possible) provide assignment rules that satisfy optimal conditions for the disputing parties, applying the rules as law actually may have the economic effect of lowering overall product.

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67. *See, e.g.*, Lipsey & Lancaster, *The General Theory of Second Best*, 24 REV. ECON. STUD. 11 (1956).

68. Lipsey & Lancaster, *supra* note 67, was published four years before Coase's article, *The Problem of Social Cost*, appeared. Coase may have been unaware of the pioneering work that was being undertaken by Lipsey and Lancaster (as well as others) at the time he was writing his paper. However, the Theory of the Second Best is not an obscure theory; it is well-known and often cited in many articles published in mainstream economic journals. *See, e.g.*, McManus, *Comments on the General Theory of Second Best*, 26 REV. ECON. STUD. 209 (1959). It is at least referred to, if not explained in some detail, in every leading undergraduate text used to teach economics majors. *See, e.g.*, E. MANSFIELD, *supra* note 3, at 461-62.

B. *The Redistribution of Wealth*

If in fact Coase's policy recommendation to follow the total product rule does not necessarily accomplish its purpose, the rule gives doubtful guidance for legal disputes in which economic efficiency is the goal. One must ask, then, what effect the total product rule does have. One way of determining its impact is to analyze it in a functional sense, that is, to look at when and how the rule operates. As shall be seen, such an analysis demonstrates that in fact the total product rule operates as a wealth redistribution scheme tending to favor the economically advantaged.[69]

Many commentators have criticized the Coase Theorem in an effort to undermine the validity of Coase's policy recommendation.[70] Their motivation in attacking the theorem seems to be, or can at least be viewed as, a response to an intuitive recognition that the policy recommendation has a built-in bias favoring large corporations and others who are economically advantaged at the expense of the less advantaged. These critics obviously believe that the only way to attack the policy recommendation is to attack the theorem underlying it.

The total product rule, however, fails as a policy based on economic efficiency—even accepting the validity of the Coase Theorem.[71] The total product rule is independently vulnerable. While the Coase Theorem may be analytically faulty,[72] the failure of the total product rule to enhance economic efficiency does not rest on the invalidity of the theorem.

Good reasons support the conclusion that Coase's policy recommendation does embody an inherent bias in favor of the economically advantaged. The concept of "maximizing total product"[73] tends to favor

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69. A number of writers have addressed the issue of the wealth effect of Coasian analysis. They primarily focus on the wealth implications of the Coase Theorem, however, and not on the redistributive effects on his policy recommendation, which is an entirely different matter. These writers focus on how the assignment of liability affects the relative wealth of the parties and whether this undermines the validity of the Coase Theorem. *See, e.g.*, Baker, *supra* note 6, at 13; Demsetz, *When Does the Rule of Liability Matter?*, 1 J. LEGAL STUD. 13, 19-28 (1972); Kelman, *supra* note 15, at 678-95; Mishan, *supra* note 52, at 269-81.

70. In addition to the sources cited *supra* note 6, see Cooter, *supra* note 44; Polinsky, *Economic Analysis as a Potentially Defective Product: A Buyer's Guide to Posner's* Economic Analysis of Law, 87 HARV. L. REV. 1655, 1669-80 (1974).

71. *See supra* text accompanying notes 58-68.

72. Cooter, *supra* note 44, at 14-24, contains an excellent discussion of the inherent problems with the Coase Theorem.

73. This expression and ones similar to it, such as "maximizing utility," "maximizing social welfare," and "maximizing joint production," are used in many different ways to mean many different concepts, by both economists and noneconomists alike, often within the same article. The references cited in the footnotes of this Article as well as this Article itself are replete with examples. There is a rigorous notion in economics of increasing the level of society's satisfaction from the available resources (*i.e.*, Pareto Optimality) that motivates the use of these expressions. However, there are limitations on that notion that are significant for policy purposes, the important ones of which are discussed *infra* text accompanying notes 103-12. These limitations are often obscured if not altogether lost when verbal concepts such as "maximizing total product" are used. In part, this is an inevitable result of transferring a scientific concept such as the modern day version of Pareto Optimality to the literary framework of law and applying it to issues that arise there. The reader should be alerted that reasonable inferences drawn from such terminology may not be meant or intended by the

entrepreneurial activities. In the typical property right dispute envisioned by Coase and Posner, the parties usually would consist of a large corporation implementing technological advances and a small individual entrepreneur or private citizen. In using Coase's approach to maximizing total product, a court would be unlikely to find that the large corporation is not adding more to the economic pie than the small entrepreneur or landowner. An assignment of the right to the small landowner would be seen as preventing the corporation from producing, thus leaving society's total product the same as it was before the corporation came onto the scene. Assigning the right to the corporation, however, would be perceived as permitting the addition of the entire total product the corporation is expected to produce, at the expense of "minor" intrusions on the rights of a few individuals surrounding the corporation. Thus the corporation must win when the courts use as a criterion the relative product of the parties.

Such bias is further enhanced when the corporation faces only a few representatives of a much larger class. In that instance, the extent of the class and the extent of the right deprivation cannot be fully evaluated by the court. The court, then, will underestimate the collective value of the right to the members of the class in comparison with the value of the right to the corporation, thereby further increasing the probability that the corporation will win.

The inherent bias in favor of the economically advantaged is merely one manifestation of the wealth redistribution effects of the total product rule. Another indication of the redistributive impact stems from the total product rule's selective impact—the rule has effect only when it makes an assignment of a right that varies from the one that would be made using traditional property rules. If traditional property rules would dictate that *A* has the right, but the application of the Coase-Posner total product rule would require that *B* should be assigned the right, then clearly the shift of the wealth resource from *A* to *B* is a redistributive effect. However, the total product rule will not always require such a transfer. One party may be entitled to the right by virtue of both traditional property law and the total product rule. But recalling that the total product rule itself does not promote economic efficiency,[74] then obviously in these cases the rule serves no independent purpose. Therefore, the only remaining conclusion regarding the total product rule's effect is that it serves solely to redistribute wealth.

The redistributive aspect of the total product rule also can be seen by examining what could happen if the courts adopted the total product rule for resolving legal disputes generally. Since the rule ostensibly purports to remedy the interference with efficiency created by the presence of transactions costs, then in cases in which transactions costs are a barrier, the use of the total product rule would not be inconsistent with that purpose. Yet when transactions costs are not interfering with negotiations—which may or may not be discernible by the court—and the parties are merely seeking

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authors. Even in instances in which such inferences are intended, they may be wrong. The discussion *infra* note 108 should make this point clear.

74. *See supra* text accompanying notes 58-68, 103-18.

to resolve a property right dispute, then the application of the total product rule to assign the property right contrary to the assignment dictated by traditional property law can only serve to redistribute wealth. In this sense the total product rule is overinclusive.

The question also arises whether the rule is necessary to overcome the effects of transactions costs. For example, given that transactions costs create inefficiencies in the marketplace, the marketplace may be the most efficient forum to resolve those impediments. If the marketplace can overcome the barriers, then the assignment of property rights according to traditional property rules will not interfere with the achievement of efficiency. If so, then the total product rule lacks justification, reaffirming that, as a practical matter, the rule serves solely to redistribute wealth.

For an example illustrating how the marketplace can overcome transactions costs, reconsider the railroad-farmer hypothetical[75] that purports to demonstrate the need for the total product rule to avoid economic inefficiency and social loss. In the hypothetical, the railroad is spewing sparks onto the landowner's property and causing crop damage. In the absence of transactions costs the railroad would pay the farmer not to grow crops on that portion of the land exposed to the sparks. The amount the railroad pays the farmer is small enough so that the railroad can still operate profitably and large enough to induce the farmer to accept the offer. Transactions costs, according to the hypothetical, prevent the railroad from negotiating with the landowners in advance so that crops will not be grown. As a result, the farmers grow their crops and the railroad damages a portion of them. If the railroad is held liable for the damaged crops, not only are the damages greater than the railroad would have paid if it had been able to negotiate in advance, but the damages are so large that the railroad is no longer profitable and goes out of business. The railroad's crop damage liability exceeds what the advance payment would have been because the advance payment represents only the profits lost by the farmer from not growing the crops. Crop damage liability, however, represents the market value of the damaged crops that includes not only lost profits, but also the costs of growing the crops as well.[76]

The purpose of this example is to demonstrate the usefulness of the total product rule. The result that occurs if there are no transactions costs (*i.e.*, the railroad pays the farmer in advance not to grow the crops) is an economically efficient outcome. The result that occurs when there are transactions costs *and* the railroad is held liable for the damages (*i.e.*, the railroad goes out of business) is clearly an inefficient outcome. According to the hypothetical, the only solution seems to be the assignment of the right to the railroad—thus providing compelling evidence of the need for a total product rule. Posner further points out that assigning the property right to the railroad leads to an outcome very similar (although not identical) to the one that would have occurred were there no transactions costs, and the parties could negotiate.[77] That is, the railroad, no longer liable for any crop

75. *See supra* text accompanying notes 46-51.
76. To review the earlier discussion, see *supra* notes 48-49 and accompanying text.
77. R. POSNER, *supra* note 57, at 18.

damage, remains in business; the farmer, knowing that compensation for crop damage is not available to cover damages that exceed the profits from the crops, will choose not to grow crops. The only difference between the original efficient outcome and the Coasian total product outcome is that the railroad, and not the farmer, keeps the forgone profits.

This example raises the question whether the solution of assigning the property right to the railroad is necessary to overcome the transactions costs effect. If not, then Coase's solution exemplifies how the total product rule operates merely to redistribute wealth. In this example, Coase implicitly assumes that markets do not induce efficient behavior in response to transactions costs.[78] That is, he assumes that the parties lack sufficient incentives to overcome the effects of the transactions costs. Coase wrongly assumes, however, that an efficient outcome may be achieved only by reassigning property rights. Even in the railroad-farmer hypothetical with transactions costs the railroad will not go out of business if it is made liable. The market grants more than one route to the efficient outcome; the negotiations in advance with all the landowners are not the only means. The railroad could offer to *buy* the land from the landowners. Economically, this is *exactly* the same as offering to compensate the landowners for the forgone profits, for it is a well-known economic fact that the price of any piece of land is equal to the present (discounted) value of its future flow of profits.[79] If the railroad negotiates with the farmers in advance, it would have to compensate them for the forgone profits each year. Since the railroad presumably intends to operate over a long period of time, purchasing the land accomplishes the economic equivalent of paying for the profits each year and does it more efficiently as well, since negotiations are concluded in one period rather than repeated over time.

Not only would the purchase of the land yield the same efficient outcome absent transactions costs, but the railroad should prefer to buy the land rather than negotiate with all the landowners in advance. If the railroad buys the land then it need buy only from those owners who suffered damage sufficiently large to make it worth their effort to contact the railroad. This strategy would cost the railroad less than negotiating to pay all the adjacent landowners, whether or not they experienced significant damage.[80] Thus, although it is possible to portray scenarios in which transactions costs bar one route to achieving economic efficiency, this does not mean that the marketplace will not find another one.[81] In this light, the necessity for a total product rule to overcome transactions costs becomes highly questionable.

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78. This is ironic since both Coase and Posner are strong advocates of reliance on the marketplace and are, in general, opposed to governmental interference to resolve economic problems. *See* Coase, *supra* note 2, at 17-19; *see also* R. POSNER, *supra* note 54, *passim*.

79. This proposition shares such wide recognition that it appears in Judge Posner's book (albeit in a different example from Posner's illustrations of the Coase Theorem). *See* R. POSNER, *supra* note 54, at 30-32.

80. Even the courts recognize the advantage to the defendant of "buying out" the potential plaintiff when the prospects of compensatory damages appear too onerous. *See* Union Oil Co. v. Oppen, 501 F.2d 558, 570 (9th Cir. 1974).

81. For an acknowledgement of the existence of market efficiency with respect to transactions costs, see Randall, *supra* note 64, at 181.

Not only does Coase underestimate the ability of the marketplace to resolve inefficiencies, he also underestimates the ability of the courts to fashion decrees that are both equitable and efficacious in overcoming the inefficiencies caused by transactions costs.[82] Thus, in his example, Coase assumes that the right must be assigned either to the farmer or to the railroad. In this "either-or" scenario, assigning the right to the farmer puts the railroad out of business, and assigning the right to the railroad results in a taking of the farmer's use of his land. Coase fails to address the ability of the courts to issue equitable decrees that leave the parties in the position they would have been in had there been no transactions costs and the parties had bargained to an efficient outcome. For example, Coase overlooks the fact that the court could declare that traditional property rules dictate that the farmer owns the right to the land but efficiency considerations dictate that the farmer's damage award be limited to a sum equal to the forgone profits from the crops.[83] This remedy leaves the farmer to mitigate damages without depriving him of total use of his land. That is, the farmer decides whether or not to grow crops but does so at his own risk since the court has already determined that the farmer may collect only the lost profits and not damages for lost crops. Thus the courts could correct inefficiencies generated by transactions costs without making either one of the parties worse off.

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82. Coase is not alone in this error. Posner finds it "unrealistic to expect courts to discover the optimum [combination of property right assignments]—and uneconomical to make them search too hard for it!" R. POSNER, *supra* note 54, at 45. As the discussion in the text indicates, such a judgment denies the equitable dimensions of the issue and thus does not reflect judicial experience to fashion suitable remedies.

83. In fact, the courts have fashioned exactly this remedy in the area of nuisance law. For example, in Lassiter v. Norfolk & C.R. Co., 126 N.C. 509, 36 S.E. 48 (1900), a real-world dispute between a farmer and a railroad, the court awarded "permanent damages" equal to the change in the market value of the farmer's affected land. The reasoning of the court parallels the analysis in the text quite closely. The quotation speaks for itself:

> If the damage . . . will probably recur from a given state of things which the defendant refuses to change, and which the Court from motives of public policy will not make him change, permanent damages are allowed as the only way of doing justice to the plaintiff, and at the same time preventing interminable litigation. As far as the plaintiff is concerned, permanent and recurring damages are the same to him, if they equally result in the destruction of his property. The latter are in some respects worse than the former, as they merely prolong his agony, and may cause even greater loss. For instance, if a farmer knows that the railroad has acquired a right to [harm] his land, he will not plant it; whereas, if he relies upon their subsequent forbearance from unlawful injury, he may suffer not only the damage to his land, but also the loss of his labor, seed and fertilizer. In other words, the loss of the crop means the loss of everything that has been put into the crop.

Id. at 514, 36 S.E. at 49. Generally, the courts take the following posture:

> Where a permanent nuisance is involved and for reasons of policy courts will not abate it by injunction, the tortfeasor acquires what amounts to an easement to commit the nuisance, on payment of the depreciation in market value. Some courts, apparently on the theory that the "easement" is not acquired until the tortfeasor pays the depreciation, have allowed the plaintiff in permanent nuisance cases to recover not only the diminution in his land value by reason of the nuisance, but also any special damages, such as loss of crops, which he suffered before trial . . . .

W. PROSSER & W. KEETON, *supra* note 19, at 638.

C. *The Constitutionality of the Total Product Rule*

Coase's total product rule with its reassignment of property rights without compensation raises serious constitutional questions relating to the state's power to regulate or take property for the public use. Coase, in effect, tells the courts that if society's total product would be improved by awarding the property to one party, they should do so even though the effect of the ruling does not include compensation for the party deprived of the right.[84] Coase's approach would permit the courts to treat this reassignment of rights as an exercise of police power regulation rather than as a taking, by using a unidimensional analysis of economic efficiency rather than the multifaceted balancing test historically demanded by the courts for making such distinctions.[85] The multifaceted balancing test considers, *inter alia*, the extent of the deprivation, the substantiality of the public interest, whether the owner is being discriminatorily singled out for such treatment, and to what extent the regulation frustrates "distinct investment-backed expectations."[86] The overarching considerations in determining whether an act of regulation constitutes a taking and thus requires compensation, however, are "justice and fairness."[87]

This much more comprehensive balancing test might well dictate different results than Coase's narrower total product rule. Whereas Coase's approach would always require a finding that the state merely exercised its regulatory police powers, the court's balancing test might well conclude that the reassignment of the right constituted a taking which requires compensation. Of course, this does not mean that the balancing test would not sometimes lead to a conclusion that the reassignment was a proper exercise of police power. Therefore, there are instances when the Coasian analysis and the traditional balancing test would yield the same results and instances where they would not.

The balancing test could consistently support Coasian analysis if the total product rule *invariably* enhanced economic efficiency over traditional property right assignments. Promotion of economic efficiency would provide the preponderant or substantial public interest necessary to sustain an exercise of police power regulation.[88] The total product rule, however, does not always enhance economic efficiency[89] and to that extent, it cannot satisfy the substantial public interest requirement. Without this substantial public interest aspect, the state is merely shifting property rights from one party to another in a dispute between two private parties and cannot justify

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84. *See supra* note 51 and accompanying text.

85. *See* Loretta v. Teleprompter Manhattan CATV Corp., 458 U.S. 419, 432 (1982) (using balancing test to distinguish between police power and taking in instances of government intrusions short of permanent physical occupation).

86. Penn Cent. Transp. Co. v. New York City, 438 U.S. 104, 124 (1978).

87. *Id.* at 123-24.

88. *See* Hawaii Housing Auth. v. Midkiff, 467 U.S. 229, 243 (1984) (approving land redistribution scheme designed to correct deficiencies in market to land oligopoly); *see also* G. GUNTHER, CONSTITUTIONAL LAW 486 (11th ed. 1985) ("What is a public rather than a private use is often a function of . . . economic theory . . . ."); Merrill, *The Economics of Public Use*, 72 CORNELL L. REV. 61, 66-93 (1987) (discussing use of economics to define public use).

89. *See supra* text accompanying notes 58-68.

the invasion of traditional property rights without compensation.[90] Therefore, applying the Coasian rule in such instances, even though it would not promote economic efficiency, would facilitate the functional equivalent of taking of private property without compensation.[91]

Indeed, without a guarantee of improved economic efficiency, whether a court could reassign the property right even with compensation is problematic. The public use doctrine requires that the state take property for a public rather than a private use.[92] Although judicial review of such issues has been very deferential to the decisions of government,[93] nonetheless, the court does require "a conceivable public purpose."[94] Without an assured result of increased economic efficiency, the total product rule lacks public purpose and a court would not permit a reassignment of private property rights to another private party.

In most regulatory taking cases the court reviews legislative actions.[95] Legislative enactments tend to confirm the substantial public interest claim, because, unless a problem has become sufficiently pervasive, the legislature would not likely deal with it.[96] In contrast, the Coasian approach would

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90. *Cf.* Miller v. Schoene, 276 U.S. 272, 279 (1928) (preponderant public concern may arise from need to preserve one set of private interests at expense of another).

91. The courts have clearly recognized the constitutional issues with regard to property right reassignments made in the public interest. Lassiter v. Norfolk & C.R. Co., 126 N.C. 509, 36 S.E. 48 (1900), involved a railroad-farmer dispute similar to the hypothetical posed *supra* text accompanying notes 41-46. The *Lassiter* court, supporting a lower court's decision to reassign, in effect, the farmer's right to undamaged crops to the railroad on public policy grounds, addressed the compensation issue:

> Railroads are quasi public corporations, charged with important public duties, which in their very nature necessarily invoke the power of eminent domain, and therefore the courts, with practical unanimity, have created a species of legal condemnation by the allowance of so-called "permanent damages." . . . It is true that the works of certain quasi public corporations are not liable to abatement on the theory that to interfere with such works might seriously affect the proper performance of their public duties; but this does not exempt them from liability for any unlawful damage . . . . [I]f [the railroad] takes the easement, it must pay for it. . . . Any attempt to do [otherwise] would be *unconstitutional.*

126 N.C. at 512-15, 36 S.E. at 49, 50 (emphasis added) (without affecting the court's meaning, the sequence of the sentences have been somewhat modified to facilitate the reader's comprehension). For related analysis from this case, see *supra* note 83.

92. Hawaii Housing Auth. v. Midkiff, 467 U.S. 229, 239-45 (1984) (discussing scope of public use); Missouri Pac. Ry. v. Nebraska, 164 U.S. 403, 417 (1896) (rejecting claim of public use for statute that granted mandatory access to railroad's property on behalf of private party).

93. *See, e.g.*, Berman v. Parker, 348 U.S. 26, 32 (1954) ("The role of the judiciary in determining whether [the eminent domain] power is being exercised for a public purpose is an extremely narrow one."). *Compare* Sunstein, *Naked Preferences and the Constitution*, 84 COLUM. L. REV. 1689, 1726 (1984) (takings jurisprudence has "a core of prohibited action that is more sharply defined than anything under the contract or due process clauses.").

94. Hawaii Housing Authority v. Midkiff, 467 U.S. 229, 241 (1984).

95. "[T]he necessity for appropriating private property for public use is not a judicial question. This power resides in the legislature, and may be exercised by the legislature or delegated by it to public officers." Rindge Co. v. Los Angeles, 262 U.S. 700, 709 (1923). *See generally* Note, *Public Use, Private Use, and Judicial Review in Eminent Domain*, 58 N.Y.U. L. REV. 409 (1983).

96. Some writers in the area of public choice question whether the solutions offered by the legislature are truly in the public interest. *See generally* J. BUCHANAN & G. TULLOCH, THE CALCULUS OF CONSENT (1962); D. LEE & R. MCKENZIE, REGULATING GOVERNMENT (1986); Buchanan, *Quest for a Tempered Utopia*, Wall St. J., Nov. 14, 1986, at 30, col. 4. Richard Epstein's

have the courts exercise what appears to be a nonjudicial regulatory function in the context of two private parties bringing a property dispute to the judiciary for resolution. These disputes do not guarantee the same indicia of public interest that legislative actions do. Therefore, in these cases the present law suggests that the parties be left as they were.[97]

Whether the total product rule tends toward more economically efficient results than the current police power/taking analysis is also questionable, even by Posner's standards. In all those cases in which the court would be at variance with Coase's results—that is, when the court would find a taking[98]—the court's determination mirrors more closely the economic outcome that would have occurred absent transactions costs barring negotiations. When the court finds a taking, the court, in effect, assigns the property right to the party with the greater total product, that is, the parties representing the public interest;[99] to that extent, the court is congruent with Coasian principles. Traditional taking law parts company with Coase at this stage, however, because the finding of a taking requires compensation, whereas the total product rule does not.[100] The court's finding of a taking and ordering of compensation accomplishes the economic equivalent of the parties privately negotiating in the absence of transactions costs when the purchasing party buys the right because he

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critique of modern takings doctrine shows a marked influence by public choice theory. *See* R. EPSTEIN, TAKINGS: PRIVATE PROPERTY AND THE POWER OF EMINENT DOMAIN 95 (1985) (regulations, taxes, and modifications of liability rules must be included in takings analysis because "[t]hose who are in control of the state will find in the unregulated forms of conduct effective substitutes for those initiatives called into question under the takings clause."); *id.* at 104 ("The current relaxed approach to regulation skews the incentives for political groups by making one form of state action subject to powerful constitutional control while leaving its close substitutes wholly unregulated."); *see also id.* at 161-81 (discussing and criticizing current public use doctrine); Epstein, *Judicial Review: Reckoning on Two Kinds of Error*, 4 CATO J. 711, 712 (1985) ("When the power of coalition, the power of artifice and strategy come into play, it often turns out that legislatures reach results that (in the long as well as short run) are far from the social optimum."). The claim made by public choice adherents, however, does not dispute the proposition that the problems addressed by the legislature are affected with public interest. *Compare* Sunstein, *Legal Interference with Private Preferences*, 53 U. CHI. L. REV. 1129, 1133-35 (1986) (Constitution prohibits use of political power to implement "naked preferences" of interest groups); Sunstein, *supra* note 93, at 1723-27 (consideration of "naked preferences" prohibition in context of eminent domain and takings).

97. *See* Hawaii Housing Auth. v. Midkiff, 467 U.S. 229, 245 (1984) ("the Constitution forbids even a compensated taking of property when executed for no reason other than to confer a private benefit on a particular private party.").

98. This, of course, does not include those cases in which the courts find that the government's actions were solely for private purposes.

99. "When forced to [make] a choice the state does not exceed its constitutional powers by deciding upon the destruction of one class of property in order to save another which, in the judgment of the legislature, is of greater value to the public." Miller v. Schoene, 276 U.S. 272, 279 (1928) (government's requirement that private owners destroy cedar trees infected with disease threatening apple industry was proper exercise of police power though not a taking). "In determining whether the taking of property is necessary for public use, not only the present demands of the public, but those which may be fairly anticipated in the future, may be considered." Rindge Co. v. Los Angeles, 262 U.S. 700, 707 (1923) (citing Central Pac. Ry. v. Feldman, 152 Cal. 303, 309 (1907)).

100. "[A] strong public desire to improve the public condition is not enough to warrant achieving the desire by a shorter cut than the constitutional way of paying for the change." Pennsylvania Coal Co. v. Mahon, 260 U.S. 393, 416 (1922).

values it more.[101] Thus the court's traditional approach more accurately mimics the marketplace without transactions costs than does Coase's total product rule.[102]

This result is not surprising, because in all taking cases, the court, in effect, uses economic analysis via the balancing test it applies in making its determination. The conclusion that a particular action constitutes a taking, however, is not dictated by the court's use of economic analysis. The conclusion is dictated instead by value judgments that can include economic factors, but that are also based on principles of fairness and equity. In all the taking cases, the court implicitly acknowledges that a barrier to economic efficiency exists and that society's efforts to overcome this barrier must be judged by whether that attempt unfairly burdens one party with the costs of overcoming the barrier. If the court finds a party has been unduly burdened, the court does not sacrifice economic efficiency in the name of justice, it merely requires that some other means of overcoming the inefficiency must be found. In effect, the court chooses one of the possible routes or channels to several of the possible states of economic efficiency. Thus, the court's decision determines who will own society's resources and this decision stands on principles of equity.

D. The Multiplicity of the Economically Efficient States

Perhaps the most fundamental flaw underlying the Coase-Posner analysis is an implicit assumption that only one economically efficient state exists.[103] This assumption is necessary to justify the reassignment of property rights contrary to traditional property rules. Because Coase and Posner view the economically efficient state as unique, they conclude that any action that improves economic efficiency is unambiguously good for

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101. Of course, when the negotiated outcome would have led to an apportionment of the right between the parties, the court may be able only to estimate what that apportionment might be. However, the court remains truer to the goals professed by Coase and Posner than the wholesale uncompensated reassignment of the right that they recommend. *See supra* note 61 and accompanying text.

102. For a discussion of another author's view that compensation is essential for economically efficient government exercise of eminent domain, see *infra* note 118.

103. Coase's general discussion with regard to "total effect," *see* Coase, *supra* note 2, at 42-44, implies a belief in one unique maximum output. This is also a necessary assumption to make in order for the conclusion of the Coase Theorem to be correct (*i.e.*, that regardless of how property rights are initially assigned, not only will they end up in the hands of the party who values them the most but also that the economic outcome is unaffected by the assignment). The conclusion of the Coase Theorem, as it was originally expressed, has since been disproved, primarily by recognizing that, in any society, there are a multitude of different economically efficient states that can be achieved from the same set of available resources. The text immediately following this footnote explains why more than one efficient state is possible. For further comments on the matter as it relates to the Coase Theorem, see Calabresi, *supra* note 40, at 69-70; Cooter, *supra* note 44, at 1-14 (discrediting Coasian conclusion that resource allocation is invariant to assignment of liability.)

Posner more explicitly expresses his belief that there is a unique maximum total product. For example, he writes " 'Wealth maximization' as a guide to governmental including judicial action means that the goal of such action is to bring about the allocation of resources that makes the economic pie as large as possible, irrespective of the relative size of the slices." Posner, *Wealth Maximization and Judicial Decision-Making*, 4 INT'L REV. L. & ECON. 131, 132 (1984).

society.[104] They fail to recognize that a course of action that improves economic efficiency may not be the only one that improves economic efficiency, or even the one that society prefers. In fact, a fundamental theorem of economics is that every society with a given amount of resources faces a multiplicity of economically efficient states from which to choose;[105] the particular efficient state toward which society gravitates reflects that society's social values. The demonstration of the multiplicity of economically efficient states for a given amount of resources is most widely displayed in the graphical analysis known as the Edgeworth-Bowley Box.[106]

Stated simply, the Edgeworth-Bowley Box shows that whatever initial distribution of goods exists in a given society, the members of that society have an incentive to trade among themselves as long as each of the trading partners wants more of one good than another and is willing to give up other products in order to obtain additional quantities of that good. As long as one party wants to give up a different good than the other party, and also wants something the other party is willing to surrender, the potential for trade exists. When the parties are no longer willing to trade because each party no longer will give up what the other party wants in exchange for his or her goods, they have reached what is called economic efficiency.[107] Clearly, the rate at which the parties will exchange, the amount they will exchange, and when they will stop trading, is greatly affected by many factors. Included among these factors are: the personal idiosyncracies of the trading partners with respect to the goods, the relative bargaining strengths of the parties, and most importantly, their initial endowments of wealth and resources. Obviously, if there are variations in any of these factors, then the economically efficient state that society will reach will be different.[108]

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104. "[R]edistribution is more efficiently carried out by the legislative branch . . . . [W]ealth maximization is the only social value . . . that *courts* can do much to promote." Posner, *supra* note 103, at 133. "[W]ealth-maximization criterion . . . requires, not that no one be made worse off by the move, but only that the increase in value be sufficiently large that the losers could [but not necessarily would] be fully compensated." Posner, *The Ethical and Political Basis of the Efficiency Norm in Common Law Adjudication*, 8 HOFSTRA L. REV. 487, 491 (1980).

105. The phrase "given amount of resources available" means that at any moment in time, society has a finite amount of resources, such as land, labor, and capital, available to use as inputs for production. Society can allocate this particular amount of resources in a vast variety of ways, a large number of these ways being economically efficient. The text following this footnote explains this point further.

106. *See* E. MANSFIELD, *supra* note 3, at 423-36; Bator, *The Simple Analytics of Welfare Maximization*, 47 AM. ECON. REV. 22 (1975). For a detailed explanation of the Edgeworth-Bowley Box, see *infra* note 108.

107. If the reader refers back to the rancher-farmer hypothetical, *see supra* note 31 and accompanying text, or the railroad-farmer hypothetical, *see supra* text accompanying notes 48-51, the reader will see that the parties in each hypothetical negotiate until neither is willing to "trade" (rights for cattle or for crops or for rail services) any further. On that basis the parties are deemed to have achieved economic efficiency, that is, when they have negotiated for all the potential gains from trade.

108. The Edgeworth-Bowley Box is a conglomeration of various concepts designed to demonstrate the motives individuals have to trade and the factors determining the outer limits of the extent of trading. The analysis is appropriate not only for understanding trade between individuals, but it also facilitates an appreciation for the optimal allocation of resources in an economy. Since the medium of expression is primarily a graphical analysis, the number of factors that can be discussed in any one exposition is limited. Therefore, the exposition here

is confined to an analysis of the incentives to trade after the goods have been produced and distributed. Readers interested in how the analysis applies to resource allocation should see E. MANSFIELD, *supra* note 3, at 427-34. For interesting applications of the Edgeworth-Bowley Box analysis to legal issues, see Birmingham, *Damage Measures and Economic Rationality: The Geometry of Contract Law*, 1969 DUKE L.J. 49, 53-58 (using Edgeworth-Bowley Box to explain basis for contract); Westin, *When One-Eyed Accountants are Kings; A Primer on Microeconomics, Income Taxes, and the Shibboleth of Efficiency*, 69 MINN. L. REV. 1099, 1102-09 (1985) (using Edgeworth-Bowley Box to provide insightful perspectives on need to separate value choices from economic efficiency analysis for purposes of evaluating tax policy).

The Edgeworth-Bowley Box analysis begins with several simplifying assumptions: there are two individuals, Ann and Bill; two goods, meat and potatoes; and a finite quantity of each commodity, *e.g.*, 100 pounds of meat and 200 bushels of potatoes. Assume that there are various levels of satisfaction Ann and Bill each derive from different quantities of consumption. Also assume that any given level of satisfaction can be achieved by differing combinations of quantities of meat and potatoes. This is based on the assumption that there is always some rate at which each individual is willing to substitute a portion of one commodity for a portion of the other and be indifferent between the choice of consuming the combination after the exchange or consuming the one prior to it.

By portraying a particular level of satisfaction with an analytic concept called an "indifference curve" in economics, the combinations of quantities of meat and potatoes that give the individual the same level of satisfaction may be graphically represented. For example:

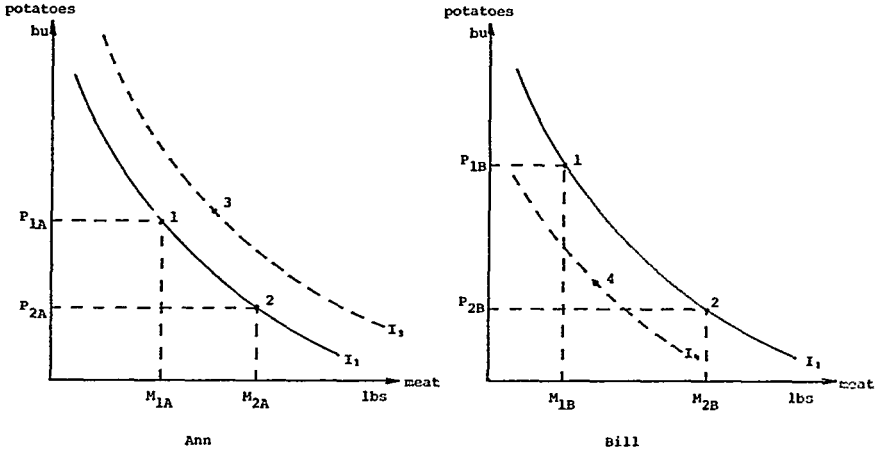

FIGURE 2

The curves labeled I_1 are each, respectively, Ann and Bill's indifference curves. Points 1 and 2 on Ann's curve represent two different combinations of meat and potatoes that give Ann equal levels of satisfaction. Any other point on the curve also represents a combination that gives her the same level of satisfaction. Similarly, points 1 and 2 on Bill's indifference curve give him the same level of satisfaction, and so forth. Any point above and to the right of Ann's I_1 curve represents a combination of goods that gives Ann a greater level of satisfaction than any point on Ann's I_1 curve. In a parallel fashion, any point below and to the left of Ann's I_1 curve represents a combination of goods that gives Ann a lower level of satisfaction. Due to the assumption of substitutability of one good for another, we know that for each combination of goods, there are other combinations that yield equivalent levels of satisfaction. Therefore, if a particular combination is not part of I_1, then it is part of some other indifference curve. An example of a combination yielding satisfaction greater than I_1 is depicted on Ann's graph as point 3 and the indifference curve with which it is associated is drawn on Figure 2 using dashes. An example of a combination yielding less than I_1 is depicted on Bill's graph as point

While it may appear that economic factors alone determine the

4 with its associated indifference curve similarly plotted. Intuitively, one can see that there is a whole range of indifference curves for each individual, and that between any two indifference curves there always lies a third that can be depicted if one chooses to do so. The collection of indifference curves for each individual is referred to as that individual's "indifference map" and reflects that individual's tastes and preferences for meat relative to potatoes at different levels of consumption.

The Edgeworth-Bowley Box is constructed by having Ann and Bill "face" each other through their respective indifference curves within the framework of a box that represents all the goods available for the two to consume. This is accomplished by "flipping" one of the individual's indifference map, Bill's in this case, to face the other:

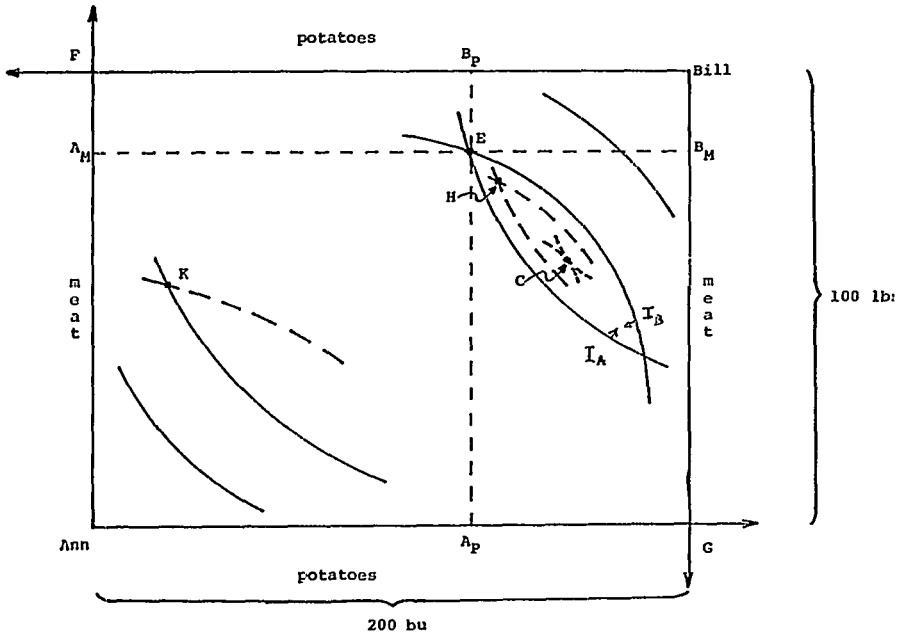

FIGURE 3

The dimensions of the box represent the entire quantities of goods available for consumption by the two individuals; the width of the box represents 200 bushels of potatoes and the height of the box represents 100 pounds of meat. The construction of the box in this fashion is such that any point in or on the box represents a complete distribution between Ann and Bill of all the meat and potatoes available for consumption. For example, point F on the box represents the allocation where Ann is endowed with all the available meat and no potatoes and Bill is endowed with all the available potatoes and no meat. Point G, on the other hand, allocates all the meat to Bill and all the potatoes to Ann. Thus, once an allocation is made (*i.e.*, a point in or on the box is selected) the only way Ann or Bill can improve their respective lots (short of one expropriating goods from the other) is to trade with each other. Trading with each other will only improve their lots if their preferences, given their endowments, are such that each is willing to give up some of what the other prefers in exchange for what the other prefers to give up.

Such potential gains from trade can be more rigorously explained through the following graphical analysis. Let E represent an initial endowment (arbitrarily chosen) for Ann and Bill, when Bill's initial endowment is B_p bushels of potatoes and B_m pounds of meat, and Ann's is

economically efficient state reached, in reality, the economically efficient state reached results in large part from value choices that society makes with respect to the initial endowments. Whether members of a society start out

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A_p bushels and A_m pounds. From their respective endowments Ann and Bill each derive their own level of satisfaction, which is reflected in their respective indifference curves associated with their endowments. These indifference curves are labeled I_A (for Ann) and I_B (for Bill). Each can improve his or her lot by moving to a higher indifference curve, and the arrow on each current indifference curve indicates the direction of increase for that individual. Any point *inside* the intersection of the two initial indifference curves represents an allocation that puts both Ann and Bill at higher levels of satisfaction, *i.e.*, at higher indifference curves. For example, point H is such a point, where the associated indifference curves have been partially drawn. Since H is a point in the box, it is a feasible allocation and therefore a possible trading result. Ann and Bill have an incentive to trade as long as at least one of them can improve his or her welfare as a result. The incentive to trade ceases once no more such additional gains can be made. Graphically, this occurs when Ann and Bill reach an allocation where their respective indifference curves do not intersect but are, instead, tangent to each other. Point C represents such a case, where again the indifference curves are partially drawn in. Clearly, no further improvements can be made through trading at point C because, unlike at point H, in order for one of the individuals to move to a higher curve, the other must necessarily move to a lower one; this is the result of the absence of trading "space" between the two indifference curves.

In fact, between any two intersecting indifference curves there are a number of tangent curves, thus making a number of ultimate trading outcomes possible. *See, e.g.*, J. GOULD & C. FERGUSON, MICROECONOMIC THEORY 423-27 (5th ed. 1980). Without more information about Ann and Bill's bargaining skills, which trading outcome actually will occur cannot be determined in advance. One can say unequivocally, however, that whatever trading outcome will occur, it will lie within the intersection of the two indifference curves associated with the initial endowments, *i.e.*, within the area defined by the intersection of I_A and I_B.

From an economic standpoint, the initial endowment represented by E is inefficient. Both Bill and Ann can each improve their well-being, at no cost to the other, by reallocating the commodities between themselves, which they will accomplish through trading. The movement from point E to an ultimate trading point such as C represents an increase in efficiency, and C is an efficient point. Moving from point E to point C, or any other efficiency point within the trading space, is the same as maximizing total product.

What Coase and Posner suggest, however, is not an efficiency move such as that from E to C. Instead, they advocate a change in the initial endowment (*e.g.*, taking the right away from Ann and giving it to Bill), which is graphically the equivalent of moving, not from point E to inside the trading space but from point E to a point such as K. They justify this transfer on the grounds that, on some basis (usually by an evaluation using market prices), the gain to Bill exceeds the loss to Ann. *See infra* text accompanying notes 117-18 (discussing problems of using market prices to make such evaluations). Once such a reassignment is made, the trading area is changed. The economy (in this case, comprised of Ann and Bill) will move to one of the new set of efficient points, *i.e.*, those contained within the intersection of the indifference curves associated with point K. Thus, Coase and Posner's total product rule is not an effort to move the economy from an inefficient point such as E to an efficient point within the economy's trading area, such as C. Instead, the policy advocates changing the trading area, which in turn changes the efficiency state toward which society itself is moving. Furthermore, casual inspection of the graph makes it clear that the reassignment of the right not only favors the assignee, Bill in this case, but the efficiency points that represent maximum total product also favor Bill. In other words, if point E is viewed as the initial endowment according to traditional property rules, which are based on principles of justice and fairness, the reassignment of the right according to the total product rule not only moves Ann and Bill to point K, but it also assures that, whatever equilibrium society will now reach, it will be one in which Bill is on a higher indifference curve and Ann is on a lower one than either of them would have been on before.

For insightful analysis of other ramifications of the Coase-Posner total product rule, also using the Edgeworth-Bowley Box, see Coleman, *Efficiency, Exchange, and Auction: Philosophic Aspects of the Economic Approach to Law*, 68 CALIF. L. REV. 221 (1980); Coleman, *Efficiency, Utility, and Wealth Maximization*, 8 HOFSTRA L. REV. 509 (1980).

with equal or unequal shares of society's resources depends on that particular society's view regarding the morality of different allocation schemes.[109] When Coase and Posner make their policy recommendations, they claim merely to be interested in overcoming transactions costs barriers that inhibit parties from freely negotiating to the economically efficient outcome.[110] They believe they have accomplished this goal when they provide an economic efficiency justification for reassigning property rights. But reassigning property rights redistributes initial endowments and thus constitutes a value choice. Moreover, while the Coase-Posner choice in reassigning rights may move society more readily toward an economically efficient state, almost invariably that state will not be the same economically efficient state toward which society was moving before the property rights were reassigned. This is because the Coase-Posner policy recommendation operates only when it assigns rights differently from the way traditional property rules assign them.[111] Thus, when Coase and Posner reassign property rights, they implicitly make a value determination concerning which economically efficient state that society will achieve. Although they argue that economics dictates their assignment, in fact it does not.

Although Coase and Posner may grant that they have made a value choice, they may still argue that it is better for society to move to a different economically efficient state than to stagnate because transactions costs render society unable to reach the economically efficient state toward which it is currently moving. At the very least, though, that argument does not preclude compensation for the party losing the right. As was shown earlier, there are other ways of overcoming transactions costs that either do not involve reassigning property rights (and thereby leave unchanged the economically efficient state toward which society is moving) or that reassign the property rights based on legal principles of equity and fairness.[112]

Not only does the total product rule change the economically efficient state toward which society moves, it also chooses one that favors the party to whom Coase and Posner would reassign the right. Because this party has more wealth than previously, the party has a greater effect on the choice of

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109. Most notably, the existence of both a "capitalistic" distribution of private property rights and a "socialistic" distribution of collective ownership reflects the sharp divergence of wealth distributions that result from different moral principles governing who has the right to own what. These differences in property rights also affect what is going to be produced and who is going to receive it. The ultimate production and distribution of goods in each society represents an efficient state that results from the initial distribution of resources. Different initial distributions of resources lead to different economically efficient states. The criticisms leveled by supporters of the capitalistic distribution of private property at the socialist distribution of collective ownership really address the question whether the implementation of the socialist values simultaneously erects barriers to the economy reaching the efficient state associated with its distribution scheme. This point, however, is often confused with the issue of the economic merit of socialist values.

110. *See* Coase, *supra* note 2, at 16, quoted *supra* note 42; *see also* R. POSNER, *supra* note 54, at 491:

> We have seen that the ultimate question in many lawsuits is what allocation of resources would maximize efficiency. The market normally decides this question, but it is given to the legal system to decide in situations where the costs of a market determination would exceed those of a legal determination.

111. *See supra* text accompanying note 74.

112. *See supra* text accompanying notes 75-83.

production of goods and services than it did before. Thus, the makeup of the economy's production will reflect the preferences of the newly endowed individuals to a greater degree than before the reassignment, thereby changing what constitutes maximum total product for that society.[113] In other words, Coase and Posner's total product rule redefines the content of maximum total product in favor of the parties to whom the rights have been reassigned.[114]

Coase and Posner's argument that their theory is the sole way to assure maximization of total product stems from their belief that a unique maximum total product exists. But as the analysis above demonstrates, a multiplicity of maximum total products exists, each associated with a different distribution of wealth embodying different societal value choices.[115] Thus society's goal to maximize total product by reaching economic efficiency is not synonymous with Coase and Posner's total product rule. The latter simply chooses one particular kind of maximum total product, a kind that may not accord with society's choices.[116]

Another difficulty with the total product rule is that there are many ways to measure improvements in economic efficiency. Coase offers no analytical basis for ascertaining which improvement most benefits society.

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113. Posner seems to acknowledge this point to some extent in *Wealth Maximization and Judicial Decision-Making*, *supra* note 103. The article is a rejoinder to Samuels & Mescuro, *Posnerian Law and Economics on the Bench*, 4 INT'L REV. L. & ECON. 107 (1984), who make a related observation on wealth-maximization and distribution throughout their article. Posner, however, appears to be unconcerned with the implications and says:

> This is true in the sense that the prices which determine value in a system dedicated to wealth maximization depend ultimately on how wealth is distributed in the system; there will be a different pattern of demands and therefore different prices if it is highly concentrated than if it is highly equalized. But courts cannot do anything about the distribution of wealth, so they might as well just take it for granted, as a responsibility which the political system has allocated elsewhere.

Posner, *supra* note 103, at 133. However, Posner is wrong; the court does, in fact, do something about distributional issues every time it makes a decision on right assignments. Though explicit redistribution can be and is affected by other arms of the government (*e.g.*, taxation and various income subsidies such as welfare and unemployment insurance), this does not mean that distributional issues are not intricately involved in judicial disputes.

114. In recent years Posner has modified the arguments he uses to support his position, presumably in response to criticisms questioning the veracity of many of his economic assertions. He refined his posture to support an ethical norm he refers to as "wealth-maximization." Fundamentally, he argues that all forms of voluntary transactions should be permitted in society, including controversial ones such as selling babies, *see* Landes & Posner, *The Economics of the Baby Shortage*, 7 J. LEGAL STUD. 323 (1978), and slavery, *see* R. POSNER, THE ECONOMICS OF JUSTICE 86 (1981). For a highly imaginative article that gives an insightful slant on the true nature underlying Posner's notion of voluntary consent, see West, *Authority, Autonomy, and Choice: The Role of Consent in the Moral and Political Visions of Franz Kafka and Richard Posner*, 99 HARV. L. REV. 384 (1985); *see also* Posner, *The Ethical Significance of Free Choice: A Reply to Professor West*, 99 HARV. L. REV. 1431 (1986); West, *Submission, Choice, and Ethics: A Rejoinder to Judge Posner*, 99 HARV. L. REV. 1449 (1986).

115. *Accord* Lachman, *Knowing and Showing Economics and Law*, 93 YALE L.J. 1587, 1595-98 (1984) (illustrating value-ladden nature of "efficiency").

116. For an excellent analysis of society's choice of values as expressed through existing restrictions on liability and entitlements, see generally Rose-Ackerman, *Inalienability and the Theory of Property Rights*, 85 COLUM. L. REV. 931 (1985).

In fact, the determination of the preferred improvement requires consideration of noneconomic social values.

It is often argued that society's preferences can be ascertained in a scientific manner by examining the market prices established for the various goods the economy produces.[117] This argument asserts that the market prices reflect not only the costs of production of these goods but also society's demand for them. In other words, if many members of society want a particular good and want it to a great extent, they will offer to pay higher prices to secure it. Thus, it is argued that the prices people are willing to pay for the good reflect how much value they receive from it. However, people's willingness to pay for a product is not determined by their desire for the good alone; the wealth and income of each individual also affects it. Even though two persons may have equal desires for a particular commodity, if one is wealthy and the other is not, clearly, at some price the wealthy person will still purchase the good, but the other one will not. Since society is comprised of people of varied tastes, different distributions of wealth will give different people greater power to affect prices and therefore production in the market. Any given set of prices found in any given marketplace reflects the tastes and preferences of society under the given distribution of wealth and income.[118]

It is debatable whether the use of these prices as the measure of potential social improvement is appropriate when evaluating a policy that proposes to redistribute initial endowments. Any change in the distribution of wealth necessarily changes the market prices. If market prices are used to assess the improvements, they should at least be the ones established after the redistribution occurs, not the prices from before the redistribution. Even this, however, does not answer the question whether the redistribution improves social welfare, since that answer requires a subjec-

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117. *See, e.g.*, Muris & McChesney, *The Effects of Advertising on the Quality of Legal Services*, 65 A.B.A. J. 1503, 1504 (1979) (society's preferences in legal services should be determined by price consumers are willing to pay); Note, *An Economic Analysis of Tort Damages for Wrongful Death*, 60 N.Y.U. L. REV. 1113 (1985) (individual preferences should determine efficient price for a life in wrongful death actions).

118. Professor Durham makes a related point regarding the appropriateness of using market prices to determine the required compensation for takings. *See* Durham, *Efficient Just Compensation as a Limit on Eminent Domain*, 69 MINN. L. REV. 1277, 1278-79 (1985). He argues that market prices tend to understate the true cost to the owner of a taking and as a result lead to an inefficient use of the government's right of eminent domain. Durham's efficiency analysis is reminiscent of Pigou's (*i.e.*, it rests primarily on the view that all costs should be internalized, *see supra* text accompanying notes 19-25), and thus reflects a belief (somewhat similar to Coase's and Posner's) that only a single economically efficient state exists. In not recognizing the multiplicity of economically efficient states, *see supra* note 108 and accompanying text, both perspectives fail to recognize the true purpose of the eminent domain right and the judicial process that constrains it. Durham's approach is designed to preserve the existing distribution and the efficient states associated with it. Coase and Posner's approach changes the distribution radically without acknowledging the equity issues involved. The traditional judicial analysis of police power, however, implicitly recognizes that a multiplicity of efficient states exists and that states change as society and the economy changes. Therefore under such circumstances the government and the courts appropriately consider a reordering of the wealth distribution, which benefits society as a whole, but they do so only under the strictest guidelines designed to preserve constitutionally protected rights and the principles of fairness and equity. *See supra* text accompanying notes 84-102.

tive judgment that transcends market prices. Finally, these market prices reflect private decisions made without consideration of greater societal implications. Therefore, when policymakers consider proposals for social change they evaluate benefits that do not currently exist in the marketplace. Since the market prices have been established without considering those benefits and their distributional impact, the market prices present a distorted picture of the value of those benefits. Consequently, the use of the marketplace as a measure of improvements for social change is not a value-free indicator and should be used with considerable caution.

III. COASE IN THE COURTS

The basic thrust of Coase's approach is that economic considerations can and should be dispositive in resolving legal disputes. His analysis implies that the attainment of economic efficiency is not only essential but also sufficient for assuring societal well being. Coase's analysis in his article assesses welfare solely by the increase achieved in the quantity of goods and services as measured by market prices. His examples and analytical discussions rely on this market method of measuring improvements in societal welfare.[119] In the article's final section, however, Coase acknowledges that "the choice between different social arrangements for the solution of economic problems should be carried out in broader terms than . . . [the market value of production] and that the total effect of these arrangements in all spheres of life should be taken into account."[120] Coase did not resolve this basic tension between economic determinism and broader social goals. His successors have largely ignored this aspect of his discussion, focusing instead on remedies that use the parameters of the marketplace as the sole measurement of increases in society's welfare. Because these supporters view market prices as an expression of society's values, they believe they have found a value-free way of applying economic analysis to achieve the unique solution to maximizing social welfare.[121] As previously noted, however, market prices may not accurately reflect society's preferences for the assignment of property rights, thus the use of market prices may constitute a value choice at odds with societal mores.[122] Moreover, effi-

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119. *See* Coase, *supra* note 2, at 43 ("In this article the analysis has been confined, as is common in this part of economics, to comparisons of the value of production, as measured by the market.").

120. *See id.* Even though Coase adds these few sentences toward the end of his article acknowledging the importance of including dimensions other than economic efficiency in social policy decisions, this disclaimer is greatly overshadowed by the article's pervasive tone proclaiming that economic efficiency is a sufficient goal in itself.

121. *See* R. POSNER, *supra* note 10, at 10 (" 'Efficiency' means exploiting economic resources in such a way that 'value'—human satisfaction *as measured by aggregate consumer willingness to pay* for goods and services—is maximized."); Easterbrook & Fischel, *Limited Liability and the Corporation*, 52 U. CHI. L. REV. 89, 96 (1986) ("Most investors need not expend resources on search; they can accept the market price as given and purchase at a 'fair price.' "). *But see* Levmore, *Explaining Restitution*, 71 VA. L. REV. 65, 75 (1985) ("So any attempt to resolve the conflict between D and E through a cost-benefit analysis based on a single set of market prices will inevitably be distorted.").

122. *See supra* text accompanying notes 117-18; *see also* Boyle, *The Politics of Reason: Critical Legal Theory and Local Social Thought*, 133 U. PA. L. REV. 685, 700 (1985) ("[T]hey pretend neutrality by 'balancing' [interests]. But whereas the value choice in a 'balancing' test is fairly

ciency analysis alone does not determine a unique solution to legal disputes. Economic efficiency analysis will only reveal the existence of a multiplicity of economically efficient states—it will not reveal which one of those states is most desirable or beneficial to society. That choice must be made pursuant to a value system based on society's morals, ethics, and legal principles, none of which market prices accurately reflect.[123] By mingling economic analysis and value choices, Coase and his proponents have obfuscated the real virtue of economic analysis, which is to discern what the economically efficient choices are rather than which efficiency choice to make.

Interestingly, in spite of the presentation by Coase and his supporters of economic analysis as determinative in legal disputes, the courts intuitively recognize the true analytical usefulness of economic reasoning.[124] An examination of the judicial opinions that cite Coase directly makes this point particularly clear. In those seventeen cases[125] the courts consciously

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obvious, cost-benefit analysts can smuggle in their preferences and thus give their tinkering with the existing distribution of wealth the sham rigor of scientific rationality.").

123. *See supra* note 108 and accompanying text; *see also* B. ACKERMAN, RECONSTRUCTING AMERICAN LAW 80-93 (1984) (economic analysis can be used to support different political views).

124. One clear example of the judiciary's awareness of the distinction between using economic analysis to discover an efficient means to a chosen end, and using it to make value choices, can be found in a presentation on the responsibilities of regulatory agencies made recently by Supreme Court Justice, then-Judge, Antonin Scalia, at a conference sponsored by the University of Houston Law Center. A former University of Chicago Law School professor, Justice Scalia has frequently expressed interest in the nexus of law and economics. During his presentation, he emphasized that value choices are subjective decisions that cannot be made through any process of economic determinism. He asserted that economic reasoning can and should be used to assist in the discovery of what those value choices might be, but ultimately the determination of choice must be based on principles other than economic reasoning. He argued that in the area of administrative law, the responsibility of making these value decisions lies with the appropriate regulatory agency and, therefore, the court should exercise great deference. Justice Scalia gave two examples: one in which the regulatory agency gives an erroneous economic argument to justify its chosen means, and the other in which the agency is faced with two competing value choices. These examples, he claimed, demonstrate when the court should and should not interfere with the agency's determination.

> [For example, if the agency chooses not to reduce a regulatory constraint because] the agency's prediction [is] that . . . although [relaxing the constraint] will save material costs, we can't be sure that the manufacturer will pass those material costs on to the consumer even though the market is fiercely competitive[,] I guess that that really would have finally pushed me over the edge and I would have said that is a prediction not even a mother could love. . . .
>
> [On the other hand, t]he outcome of cost benefit analysis in the broad sense . . . is particularly difficult for a court to second guess when it involves weighing the impact of a proposed action upon two quite different social values. For example, . . . aesthetic values versus full employment, or minor health risk versus low consumer prices. How can one say, except at the remote margins, that a particular call is right or wrong when you are weighing apples or oranges.

Address by Judge Antonin Scalia, University of Houston Law Center Conference *Rethinking Tort and Enviromental Liability Laws: Needs and Objectives of the Late 20th Century and Beyond* (Apr. 18, 1986) [hereinafter Scalia Address]; *see also* Scalia, *Responsibilities of Regulating Agencies Under Environmental Laws*, 24 HOUS. L. REV. 97, 100-01 (1987) (revised remarks).

125. To research the impact of Coase's article, *The Problem of Social Cost*, *supra* note 2, on the courts I employed a computer search to retrieve every case citing the name "Coase" since 1960 (the year in which his article was published). As of August 14, 1986, the search revealed 21

use economic analysis, yet most courts reject economic determinism and base their decisions on other factors.

These seventeen cases represent a microcosm of the extent to which courts use economic reasoning in their legal analysis. Some make merely incidental use of economic analysis, others use economic reasoning as an integral part of the judicial analysis; in two, the courts appear to use economics as determinative in reaching their conclusions. In every case, though, the courts had to resort to broader social policies to make their decisions.

A. *Conventional Uses of Economic Analysis*

At one end of the spectrum are those cases in which economic analysis does not play a major role in either the court's reasoning or in its ultimate conclusion.[126] For example, the United States Supreme Court majority opinion in *United Housing Foundation, Inc. v. Forman*[127] seems steeped in economic analysis because it considers a great number of economic factors. However, the majority's analysis draws very little from the process of economic reasoning. On the other hand, economic reasoning plays a significant role in the arguments of the dissent. Economic factors are data about goods and services being produced,[128] while economic reasoning is

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cites from both federal and state courts. Two cites were discarded because they merely referred to Coase in the title of an article by another author. Two were reported too late to include in this analysis.

126. Ironically enough, Judge Posner's opinion for the panel decision in Analytica, Inc. v. NPD Research, Inc., 708 F.2d 1263 (7th Cir. 1983), illustrates such de minimis use of economic reasoning. The court had to decide whether the plaintiff's law firm, which once assisted in the transfer of stock from the defendant corporation to its (now former) employee, should be barred from the current case on the grounds that a law firm may not represent an adversary of its former client if the subject matter is substantially related. *See* MODEL RULES OF PROFESSIONAL CONDUCT, Rule 1.9(a) (1983); *see also* International Elec. Corp. v. Flanzer, 527 F.2d 1288, 1292 (2d Cir. 1975) (counterclaim against plaintiff for attorneys' fees did not render firm counsel to plaintiffs, so firm was not disqualified from representing defendants); Silver Chrysler Plymouth, Inc. v. Chrysler Motors Corp., 518 F.2d 751, 756-57 (2d Cir. 1975) (prior association with firm representing defendant did not disqualify attorney representing plaintiff); Emle Indus., Inc. v. Patentex, Inc., 478 F.2d 562, 575 (2d Cir. 1973) (previous representation of defendant disqualified counsel representing plaintiffs in patent litigation). Although the law firm had been the sole legal representative in the prior transaction between the defendant corporation and its employee, the law firm argued that its actual client was the employee and not the defendant corporation. Judge Posner responded that this contention was irrelevant because, in effect, all parties engaged the firm and had done so for economic reasons, *i.e.*, to save on attorneys' fees. He cited Coase's article with a *cf.* signal to support the proposition that conducting a transaction at a lower cost benefited everyone. In affirming the lower court's disqualification order, however, Judge Posner stated that whatever entity employed the law firm in this previous transaction was in fact irrelevant to the legal issue. Precedent dictated that the law firm's access to confidential information of the defendant corporation would be the crucial factor. *See* 708 F.2d at 1268-69. Thus, the court's invocation of economic reasoning comprised a minor portion of the opinion, and it essentially played no role in reaching the result. Furthermore, the economic analysis itself was little more than an application of common sense and the cite to Coase's article was more ritualistic than appropriate.

127. *See* 421 U.S. 837 (1975).

128. Courts routinely use economic factors to assist in determining issues such as the measure of damages. For instance, the reduction of a future income stream to present value

an analytical process characterizing behavior and decisionmaking in response to various incentives. *United Housing* addresses whether stock issued by a nonprofit cooperative housing corporation constitutes securities within the meaning of the Security Act of 1933.[129] Both the majority and the dissent consider a number of different factors, including the economic issue of whether the particular stock in question was purchased for the purpose of earning profits. The majority looks at whether meaningful profits could be earned by the stock, whether the stock could be sold at an appreciated value, and whether there was a *legal* basis for considering tax savings and below-market rents a form of earning profits. The majority answers the questions negatively and concludes that the stock is not a security for the purposes of the Act.[130] Although the majority looks at economic aspects of the problem, it does not engage in economic reasoning. Justice Brennan's dissent argues that earning profits can take forms other than capital appreciation and participation in earnings. Drawing on economic reasoning, his dissent points out that an investor makes no distinction between tax savings and after-tax income, and therefore money saved is just as much a form of profit as money earned.[131] This analysis is a type of economic reasoning because it assists the Court in recognizing the similarities between seemingly disparate forms of transactions based on their economic realities.[132]

Similarly, in *Powers v. United States Postal Service*,[133] the economic reasoning is not as intrinsic to the judicial analysis as in other cases, though its role is qualitatively greater and more integral to the decision than in *United Housing*. Judge Posner addresses the question whether state law or federal common law governs lease disputes between the United States Post Office and landlords. The particular dispute before the court involved a landlord in Indiana seeking to terminate a long-term lease with the Post Office in which the rents, due to inflation, were particularly favorable to the Post Office and unfavorable to the landlord.[134]

Proceeding under the assumption that application of state law would cause the Post Office to lose its favorable lease,[135] Judge Posner evaluates a

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requires application of many economic factors that affect the value of future income. *See* Jones & Laughlin Steel Corp. v. Pfeifer, 462 U.S. 523, 538-53 (1983).

129. *See* 421 U.S. at 840.

130. *See id.* at 840-60.

131. *See id.* at 863-64 (Brennan, J., dissenting).

132. The dissent cites Coase in addition to P. SAMUELSON, ECONOMICS (9th ed. 1973), for the proposition that ventures undertaken for the purpose of generating tax savings are as much a form of income as participation in a venture that generates earnings or capital appreciation. There could be no more appropriate supporting source for that proposition than the eminent *Economics*, a mainstay economics textbook which has been used around the world for over forty years in major universities. Coase's article, on the other hand, though it uses elementary economic analysis, is not concerned with, nor does it make any comment on the issue of savings versus earnings. It is not clear why the author of the opinion, Justice Brennan, chose Coase's article as supplementary support for the proposition.

133. 671 F.2d 1041 (7th Cir. 1982).

134. *See id.* at 1041-42.

135. Posner makes this assumption in order to examine the arguments for application of federal common law in a light most favorable to them. Later in the opinion, after determining that state law should apply, Posner gives some arguments why state law would not dictate

number of reasons that would justify applying federal common law. Supreme Court doctrine on the choice of federal common law compels Posner to consider whether the Postal Service requires nationally uniform or distinctive treatment in its leases, whether the state law intentionally discriminates against the Postal Service or threatens its effectiveness, and whether the application of federal common law would reduce the Postal Service's cost of operation.[136]

Judge Posner applies economic reasoning to answer the last question.[137] He argues that even if the application of federal common law would avoid the loss of low rent resulting from an eviction, this cost savings would only be in the short run. Landlords, Judge Posner says, would charge the federal service higher rents to compensate for differences in their rights under federal versus state laws.[138] In this view, not only would application of federal common law generate no cost savings,[139] but, Judge Posner (incorrectly) argues, average rents would also likely be lower if state law were applied.[140]

Judge Posner finds the other arguments favoring federal common law, such as those stemming from the concern for national uniformity and avoidance of discriminatory treatment, also unpersuasive.[141] Furthermore, he contends that federal common law on landlord-tenant relations does not exist,[142] and that its application would require the federal courts to fashion one, a task that he thinks the federal courts would not do well.[143] As a result, Judge Posner decides that state law should apply.[144]

Though economic analysis does not comprise a major portion of the opinion, Judge Posner uses fairly sophisticated economic reasoning to address an issue he feels is important. He engages in a market analysis (albeit, an incorrect one[145]) to determine *a priori* whether the cost of postal

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termination of the lease. He remands the case to the lower court for a hearing on this issue. *See id.* at 1044-46.

136. *See id.* at 1044-45.

137. In fact, Judge Posner considers the issue of reduction in costs before considering any of the other issues. This may reflect the primacy of the economic issues in his thinking. *See id.* at 1044.

138. *See id.*

139. *See id.* (Posner cites Coase with a "*cf.*" signal for support though connection is not readily apparent).

140. Judge Posner's economic reasoning is wrong because rents would go up only in those states in which federal common law is less protective of landlords than state law. In those states where federal law is more restrictive on the tenant, the rents should actually go down. Without exhaustive information about the actual impact in each state, it is impossible to predict whether application of federal common law would in fact raise or lower costs for the Postal Service, indicating again the problem arising from focusing solely on the parties to the dispute. Posner certainly has not found, as he implies, *see id.* at 1045, any *a priori* reason for believing that costs will move in one direction or the other.

141. *See id.*

142. *See id.* Though Posner cites United States v. Certain Property in Manhattan, 306 F.2d 439, 444 (2d Cir. 1962), in support of this assertion, he does not reconcile the claim with the lower court's finding that since the Postal Service *was* subject to federal common law, it was not owed the painting services from the landlord.

143. *See* 671 F.2d at 1046.

144. *See id.*

145. *See supra* note 140.

services would be affected by the decision. He does not, however, draw exclusively on his economic conclusion for the disposition of the case as a whole. He considers a number of factors other than economic ones that concern both the Postal Service's ability to function and the federal court's ability to rule.[146]

Whether Judge Posner would have resolved the case the other way had he found a real cost saving in applying federal common law is unclear. He observes that any cost savings to the Postal Service is due solely to a redistribution from the general taxpayer to the Indiana citizen and not from a lowering of social costs. Savings of social costs arise from efficiency gains and usually are reflected in lower costs of production. The cost savings to the Postal Service in *Powers* would result from a reallocation of those costs to different parties. Posner concludes, therefore, that a reallocation of costs alone does not justify a finding in favor of federal common law since it would generate no net change in societal welfare.[147] Whether Judge Posner finds economic efficiency determinative in deciding legal disputes, however, is not discernable here; his findings on the other legal factors also support the use of state law. Absent finding an improvement in economic efficiency to support a particular decision, Judge Posner considers legal factors and legal reasoning necessary to his decision.

The economic reasoning used in the *Powers* case is not transcending; it is one consideration in a multifaceted judicial approach that weighs all factors equally in reaching a conclusion. *Powers* is thus materially distinguishable from those cases in which economic analysis forms the core of the court's reasoning process. The centrality of the economic reasoning may not be immediately apparent in each of these cases, because much of the analysis is of a kind used both in economics and in law. Many areas of the law evolved reasoning processes identical to those developed by economists to resolve similiar issues.[148] One such example emerges in *Nelson v. United*

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146. *See* 671 F.2d at 1044-45. These factors include whether or not state law would be sufficient to deal with the intricacies of federal programs, whether there would be discrimination toward federal programs under state law and, finally, whether there would be problems with uniformity across state lines.

147. *See id.* at 1044. Posner makes a value judgment when he concludes that a redistribution alone does not represent a change in societal welfare. To see this, imagine that Indiana is, coincidentally, the richest state in the nation and that Indiana's landlords are the nation's wealthiest landlords. If the costs are redistributed away from the less advantaged average taxpayer and charged to the better-off Indiana landlord, even though actual costs are unchanged, under some value systems society's welfare is still improved. Judge Posner's implicit value system in *Powers* is that interpersonal transfers of wealth have no impact on the measure of society's welfare regardless of the equity, or lack of equity, in the initial endowments.

148. The best known examples of the similarities between legal reasoning and economic reasoning are the balancing test, the cost-benefit analysis, the theories of accident reduction, and the theories of deterrence. These cover a broad spectrum of legal fields. *See, e.g.*, McChesney, *Commercial Speech in the Professions: The Supreme Court's Unanswered Questions and Questionable Answers*, 134 U. PA. L. REV. 45, 49 (1985) (discussing Court's use of cost-benefit analysis to evaluate professional advertising); Spradley, *Defensive Use of State of the Art Evidence in Strict Products Liability*, 67 MINN. L. REV. 343, 349 (1982) (mentioning significance of accident reduction in theory of strict liability); Wiley, *A Capture Theory of Antitrust Federalism*, 99 HARV. L. REV. 713, 774 (1986) (noting importance of deterrence in antitrust enforcement); Note,

States,[149] in which the focus is on the reduction of the risk of accidents. Since the legal and economic communities each have addressed the problem of risk reduction, it is not surprising that the two disciplines have developed essentially the same analysis. Risk reduction is, however, only one possible policy approach that a court might take when resolving accident disputes; other alternative approaches also are available.[150] Accident disputes are not the only legal issues for which a menu of policy choices exists. Competing policy considerations often face a court when it resolves any particular dispute. Only some of these policies require the kind of reasoning used in economics in order to reach an appropriate result. When the court makes a decision to emphasize one policy over another, it chooses to favor the societal concerns promoted by that policy over those of the alternatives. The policy chosen may, by its very nature, call for the application of economic analysis to resolve the dispute. This is not the same as the Coase-Posner view that courts should endeavor wherever possible to apply economic reasoning to each case in order to determine the "unique efficient resolution."[151]

In *Nelson v. United States*,[152] the court is quite conscious that it might have to choose between possibly competing social values. The court focuses on whether, under the *Restatement of Torts*, an owner's duty to protect "others" from unreasonable risks of harm includes liability for harm caused to the employees of a hired independent contractor.[153] Two competing concerns trouble the court. One is that allowing the employee to file a traditional tort claim against a fortuitous third party owner would permit the possible circumvention of workers' compensation laws limiting damages for job-related injuries.[154] The other is the need to minimize the risk of accidents.[155] A resolution of the dispute in favor of the first concern employs a statutory analysis to determine whether in fact the employee in question is subject to the restrictions of workers' compensation laws.[156] To

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Political Legitimacy in the Law of Political Asylum, 99 HARV. L. REV. 450, 466 (1985) (relating ad hoc balancing approach to political asylum law).

149. 639 F.2d 469 (9th Cir. 1980).

150. *See infra* notes 212, 238 and accompanying text.

151. *See supra* note 108 and accompanying text (discussing multiplicity of economically efficient states).

152. 639 F.2d 469 (9th Cir. 1980).

153. *See id.* at 474 (interpreting RESTATEMENT (SECOND) OF TORTS § 413 (1965)).

154. *See id.* at 475.

155. The court recognizes that it is "choosing between a policy designed to reduce injuries by providing for the contractor's and owner's clear allocation of safety responsibilities, on the one hand, and the avoidance of perverse or fortuitous liability for injury on the other." *Id.*

156. One problem is that the deceased employee had a possible cause of action against two different parties based on three different theories. First, he was entitled to a limited recovery from his direct employer, the independent contractor, based on the workers' compensation laws. Second, he had a possible cause of action against the general contractor, the government, on a theory of general negligence. Finally, as a seaman he may have had a statutory remedy under the Jones Act. The court worried that allowing the employee to recover from both the independent contractor and the general contractor would allow all injured employees of independent contractors to recover more than that permitted by the policies underlying the worker's compensation law. Thus, merely by virtue of a peculiar position of employment, the employee of the independent contractor could circumvent the workers' compensation restrictions.

choose instead a policy of accident avoidance entails examining the particular facts and circumstances concerning the third party owner's knowledge, expertise, and capacity to contribute in any meaningful way toward avoiding the harm. This analysis, unlike the statutory interpretation, focuses on the relative capacities of individuals to affect the probability that certain events will occur and it is the kind of analysis engaged in by economists when dealing with problems of accident reduction.[157]

The *Nelson* court first chooses to emphasize the policy of accident avoidance. It finds that holding the third party liable would not contribute to safety under the particular circumstances of the case.[158] The court implicitly acknowledges its application of economic reasoning to this issue by citing the work of Guido Calabresi, another advocate of the application of the use of economics in law.[159] The court does not, however, rely exclusively on accident reduction analysis. It interweaves its findings with other policy considerations, including the validation of the distinction between employers and independent contractors and the preservation of private contractual relationships.[160] The court concludes that making the third party liable would undermine those interests without leading to any safety benefits and is therefore not justified.[161] The court further buttresses its arguments by noting that its decision avoids compromising the workers' compensation scheme.[162] Thus, although the court elects to emphasize a policy that uses economic analysis, its ultimate decision rests on the social ramifications of different policy choices.[163]

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157. For some economic discussions of accident reduction, see A. POLINSKY, AN INTRODUCTION TO ECONOMICS AND LAW 37-49 (1983).

158. The court decides against holding the defendant liable because there was no evidence that the defendant was "in a better position . . . to foresee and evaluate the best methods of protection" in comparison to the independent contractor's special expertise on the subject. *See* 639 F.2d at 478.

159. *See id.* (citing G. CALABRESI, THE COST OF ACCIDENTS: A LEGAL AND ECONOMIC ANALYSIS (1970)).

160. *See id.*

161. *See id.* at 479.

162. The trial court believed that its decision did not compromise the worker's compensation scheme because the decedent was eligible for extra remedies under the Jones Act by virtue of his status as seaman. The appellate court points out the trial court's error by showing that the decedent did not have a Jones Act remedy in this case because the government was the defendant and is exempt from Jones Act liability under the Suits in Admirality Act. *See id.* at 478-79.

163. Another group of opinions which concern used goods dealers demonstrate the use of economic reasoning to lay bare value choices even when the choices are not limited to ones of economic dimensions. Economic reasoning also discerns policies relating to fairness and equity. As Justice Scalia noted, cost benefit analysis "is even helpful when one is not dealing with economic matters." *See* Scalia Address, *supra* note 124. In these cases the courts consider whether the application of strict liability to used goods should be the same as for new goods dealers. Based on a variety of policy considerations, the courts choose to circumscribe strict liability's application, albeit in varying degrees.

By its very nature, the application of strict liability calls for economic reasoning because strict liability is a policy decision to interfere with the marketplace. *See generally* Spence, *Consumer Misperceptions, Product Failure and Producer Liability*, 44 REV. ECON. STUD. 561 (1977). The doctrine serves to insure that certain standards of quality, durability, and safety are met by threatening enterprises with liability for damages if they fail to meet these standards. *See* Turner v. International Harvester Co., 133 N.J. Super. 277, 289, 336 A.2d 62, 69 (1975). The doctrine also assures access to compensation for victims of defective products. *See id.* For

B. *Judicial Innovation Through Economic Reasoning*

Cost savings and risk reduction typically call for an economic approach and thus *Powers* and *Nelson* are good examples of conventional uses of

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further discussion of policy considerations underlying strict liability, see W. PROSSER & W. KEETON, *supra* note 19, at 692-93. The doctrine, however, has the economic effect of higher prices because manufacturers incur greater costs in meeting higher standards and providing funds to satisfy any claims.

Although strict liability could be analyzed from an equitable perspective alone, the courts in the three cases discussed here use the economic aspects of strict liability as an analytical starting point. Actually the two later opinions both quote a passage from *Turner* characterizing enterprise liability in this fashion. Enterprise liability is a policy of applying strict liability to all costs, direct and indirect, associated with a good distributed by an enterprise. Pigou's policy of internalization of all costs is consistent with enterprise liability, both of which impliedly adopt a policy of preserving initial ownership rights. *See supra* text accompanying notes 20-24; *see also supra* note 118. The passage from *Turner* inappropriately cites Coase for support of the economic justification of enterprise liability, which is ironic since Coase wrote his article with the specific purpose of destroying the economic validity of the Pigouvian approach.

The courts begin their analysis by considering whether strict liability should be applied to insure that consumer expectations with repect to used goods are met. Turner v. International Harvester, 133 N.J. Super. 277, 336 A.2d 62 (1975), rather cursorily concludes that public concerns for safety (but not quality or durability) mandate that "justifiable safety expectations" be met, holding that used goods dealers are liable if their goods prove to be "unreasonably dangerous." *See id.* at 289, 336 A.2d at 69.

In Tillman v. Vance Equipment Co., 286 Or. 747, 596 P.2d 1299 (1979), the court agrees with the *Turner* court but decides against the imposition of strict liability without regard to the defendant's ability to affect the risk. *See id.* at 753-54, 596 P.2d at 1302-03. Its decision is based on what the court perceives would be the economic effect otherwise. The court reasons that imposition of strict liability to assure safety when used goods dealers could not affect the risk of accident would unduly restrict the flexibility of used goods businesses to make available a variety of goods under a variety of terms. *See id.* at 755, 596 P.2d at 1303. The value to society of such flexibility in used goods markets outweighs the merits of compensation for the victims when the used goods dealer could not in any way affect the risk of harm. *See id.* at 756, 596 P.2d at 1303-04. In discerning that the imposition of strict liability might cost society the use of an essential feature of used goods markets, the *Tillman* court uses economic analysis to recognize all policy choices confronting it—the continuing flexibility of used goods markets as well as compensation for victims.

The courts in these cases also use economic reasoning to discern issues of equity. In Tauber-Arons Auctioneers Co. v. Superior Court, 101 Cal. App. 3d 268, 161 Cal. Rptr. 789 (1980), the court, using an economic anaylsis similar to *Tillman*, argues that imposing strict liability on the used goods dealer who has no control over product safety works at irrational cross purposes with the objectives of strict liability policy. The court concludes that when the used goods dealer can not affect the level of safety and it could not pass the costs of strict liability to the responsible manufacturer, imposing strict liability would work an injustice. *See id.* at 283, 161 Cal.Rptr. at 798.

In a similar vein, the *Turner* court uses economic reasoning to ascertain the equity of allowing the used goods dealer to escape liability if the good is sold with an "as is" disclaimer. *See* 133 N.J. Super. at 292, 336 A.2d at 70-71. The *Turner* court applies economic analysis to demonstrate that various factors would affect the parties' relative bargaining position. That analysis permits the court to find that the usual presumption, *i.e.*, that the parties to an exchange are the ones best able to determine its value, may be inoperative. *See* 133 N.J. Super. at 293-94, 336 A.2d at 71. The *Turner* court thereby concludes that when the parties are in an unequal bargaining position to the disadvantage of the customer, it would be unfair to allow an "as is" disclaimer to isolate the used goods dealer from damages for which he would ordinarily be liable. *See* 133 N.J. Super. at 295, 336 A.2d at 72. By examining the possibility of control by the used goods dealer and the factors affecting the bargaining outcomes, the court is able to recognize issues of equity even when they are of a noneconomic dimension.

economic reasoning by the courts.[164] In *Webster v. City of Houston*[165] and *White Lake Improvement Association v. Whitehall*,[166] on the other hand, the courts' use of economic analysis is not traditional. One issue is particularly noneconomic, and another issue, though containing an economic component, is traditionally analyzed from a noneconomic perspective. In these cases the courts' applications of economic analysis are more innovative and novel.

In *Webster* the Fifth Circuit Court of Appeals refused to uphold a jury award of punitive damages against a city police department for tacitly encouraging police officers to use excessive force.[167] Webster, a teenager, was shot and killed by the police after surrendering to them at the end of a car chase. Officers placed a gun by Webster's side to make it appear that he was armed. This act was not an isolated incident but a general policy of cover-up condoned by the Houston Police Department and widely practiced throughout the Houston Police force.[168] The court interpreted the Supreme Court's decision in *City of Newport v. Fact Concerts, Inc.*[169] as precluding punitive damage awards except in egregious circumstances not present in the instant case.[170]

Judge Goldberg, in a specially concurring opinion, disagreed with the view that *Newport* permitted punitive damages in egregious circumstances, arguing that if it did, the *Webster* case would surely qualify.[171] Judge Goldberg criticizes the Supreme Court's opinion in *Newport* as overly broad.[172] In his view, *Newport* rests on the premise that awarding punitive damages against a municipality has no deterrent effect on governmental misconduct. Judge Goldberg agrees that this rationale supported the *Newport* ruling because the case involved only a single instance of misconduct by *individual* high-level government officials (*i.e.*, the mayor and the city council). In such cases, punitive damages would not deter the municipality because the individuals engaged in the misconduct do not pay the damages. That rationale, Judge Goldberg argues, does not work when the misconduct involves a pervasive governmental policy supported by collective action over time.[173] Damages can have a deterrent effect in that case because the taxpayers will demand a change in governmental policy if the cost of the damage payments becomes excessive. Only by weighing the policy's benefits (*i.e.*, encouraging aggressive police action to reduce crime) against its true costs (*i.e.*, the killing of innocent people) will the government "promote socially correct decisionmaking."[174] In the *Webster* situation,

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164. The issues in *Tillman*, *Tauber-Arons*, and *Turner*—victim compensation, unequal bargaining positions, satisfaction of expectations, continued existence of markets, as well as risk reduction—also evoke traditional economic analysis.

165. 689 F.2d 1220 (5th Cir. 1982), *aff'd on reh'g*, 739 F.2d 993 (5th Cir. 1984).

166. 22 Mich. App. 262, 177 N.W.2d 473 (1970).

167. *See* 689 F.2d at 1223.

168. *See id.* at 1221-23.

169. 453 U.S. 247 (1981).

170. *See* 689 F.2d at 1229.

171. *See id.* at 1231 (Goldberg, J., concurring).

172. *See id.* (Goldberg, J., concurring).

173. *See id.* at 1236 (Goldberg, J., concurring).

174. *See id.* at 1237 (Goldberg, J., concurring).

not all instances of the harm caused by the policy are litigated because not all instances of the cover-up are detected. Since compensating damages punish the government only for harm for which it "got caught," the government is not forced to consider the true costs of its policies.[175] In this situation, Judge Goldberg argues, punitive damages serve a deterrent function because government pays for the undetected harm.[176] Thus punitive damages can serve to internalize the full costs of harmful acts which, after all, is a proper function of damages.

Judge Goldberg's use of economic analysis is innovative. Only recently have economists turned their analytic skills to the issues of deterrence in intentional wrongs.[177] Judge Goldberg's application of such reasoning represents an excellent example of how developing economic thinking about legal issues can readily reach the courts. The more traditional legal approach to punitive damages rests largely on theories of retribution and on vague notions of deterrence.[178] Judge Goldberg's more refined (economic) analysis on the internalization of costs permits a more rigorous and more accurate assessment of the role that punitive damages can serve.

The innovative use of economic reasoning in *White Lake Improvement Association v. Whitehall*[179] illustrates how a court may independently embrace economic reasoning as a tool of its own. The court brings Coase's transactions costs concept to bear on the doctrine of primary jurisdiction. The court held that although a nonprofit conservation association has standing to bring an action to abate a private nuisance, the association nonetheless must use the remedy provided by the administrative agency having primary jurisdiction over the claim.[180] In its discussion, the court applies economic reasoning to the primary jurisdiction issue—one that has not been explicitly addressed by economists, and one that appears to have no economic aspects calling for the use of economic reasoning.

The *White Lake* court concludes that the plaintiff must pursue its claim administratively, but gives examples of situations in which the doctrine of primary jurisdiction would not be appropriately invoked. The court states, "[i]n another case it might appear that immediate equitable intervention is necessary, that an administrative proceeding would not give the plaintiff the relief to which he is entitled."[181] The footnote appended to this sentence adds a transactions costs analysis:

> Indeed, to the extent that allocation of clear water among competing users is an economic problem, the optimal distribution of this resource is discouraged by legal obstacles which distort the

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175. *See id.* at 1238 (Goldberg, J., concurring). For further discussion of "true cost," see A. ASIMAKOPULOS, *supra* note 23.

176. *See* 689 F.2d at 1238 (Goldberg, J., concurring).

177. *See generally* Becker, *Crime and Punishment: An Economic Approach*, 76 J. POL. ECON. 169 (1968); Polinsky & Shavell, *The Optimal Tradeoff Between the Probability and Magnitude of Fines*, 69 AM. ECON. REV. 880 (1979); Shavell, *Criminal Law and the Optimal use of Nonmonetary Sanctions as a Deterrent*, 85 COLUM. L. REV. 1232 (1985); Stigler, *The Optimum Enforcement of Laws*, 78 J. POL. ECON. 526 (1970).

178. *See* W. PROSSER & W. KEETON, *supra* note 19, at 11-12.

179. 22 Mich. App. 262, 177 N.W.2d 473 (1970).

180. *See id.* at 270, 177 N.W.2d at 476.

181. *Id.* at 283-84, 177 N.W.2d at 483 (footnote omitted).

> bidding process between recreational and industrial users. We recognize that refusal of a court to entertain a case by invoking the concept of primary jurisdiction may raise the cost to the citizen of challenging water pollution, and that adjustment of competing public and private claims will be delayed or prevented altogether if it becomes significantly less costly for industry to pollute waters than for private citizens to restrain their pollution. For an analysis of this problem of "transaction costs" see Coase, The Problem of Social Cost, 3 Journal of Law and Economics 1 (1960).[182]

The court makes an accurate and finely tuned application of Coase's thinking on the effects of transactions costs, with regard to an issue that Coase did not address.[183] The court extrapolates the true meaning behind Coase's arguments divorced from any particular value judgment,[184] and utilizes it for an issue that, at least superficially, does not seem to have any economic relevance.[185]

The *White Lake* analysis demonstrates how economic reasoning can be useful for resolving legal problems that defy proper resolution by pure legal analysis alone. While courts often note the hardships created by the primary jurisdiction doctrine, they nevertheless feel compelled to apply it.[186] The footnote in *White Lake* provides a way of recognizing how invocation of the primary jurisdiction doctrine actually can work to deprive parties of relief to which they are entitled.[187] By tying the economic analysis to the requirement that deference to an agency's primary jurisdiction is necessary only if the party can receive an adequate remedy, the court provides an economic basis for short-circuiting the primary jurisdiction requirement. This marriage of law and economics creates a synergistic effect, permitting the emergence of a more powerful tool for the resolution of legal disputes.

In the cases discussed thus far, the courts have consciously used economic analysis but did not discuss the implications of using it. In the remaining cases the courts are more philosophical and analyze the usefulness and limitations of economic reasoning. Most courts explicitly recognize that economic analysis does not compel value choices and that different arguments can support a variety of competing policy choices.

Dobson v. Camden[188] perhaps best exemplifies this approach. The court

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182. *Id.* at 283-84 n.32, 177 N.W.2d at 483 n.32 (last citation omitted).

183. Although the Coase Theorem may appear to act primarily in support of large corporations, *see supra* text accompanying notes 73-74, the court in *White Lake* uses the Coase Theorem on behalf of private citizens in a suit against the large industrial interest.

184. Thus, from a neutral standpoint, the court uses the Coase Theorem to come to a value judgment implicitly favoring fair and equal access to the courts.

185. Although *White Lake* appears to be a typical nuisance case, in fact the case is a procedural decision on whether or not to require the exhaustion of all administrative remedies before seeking judicial relief.

186. *See* McGee v. United States, 402 U.S. 479 (1979) (hardship is no excuse for not invoking agency's primary jurisdiction); *see also* C. WRIGHT, HANDBOOK OF THE LAW OF FEDERAL COURTS 210-12 (3rd ed. 1976). For an understanding of the court's authority on primary jurisdiction at that time, see *White Lake*, 22 Mich. App. at 280 n.27, 177 N.W.2d at 481 n.27.

187. *See* 22 Mich. App. at 283 n.32, 177 N.W.2d at 483 n.32.

188. 705 F.2d 759 (5th Cir. 1983).

faced a choice between the "one-satisfaction" rule (the Texas rule concerning joint tortfeasors when one settles before trial)[189] and the policy of deterrence in civil rights cases. In *Dobson* a restaurant manager had the plaintiff arrested because the manager suspected that the plaintiff might attempt to avoid paying his bill. While in jail, plaintiff was severely beaten by police. The restaurant settled with plaintiff out of court before trial. The police officers went to trial and, in addition to the restaurant, one of the officers was held liable. The jury awarded total damages for the collective harm caused by all joint tortfeasors in an amount less than the amount already collected by plaintiff from the restaurant alone. The police officer claimed he was not obliged to pay his share because plaintiff then would be overcompensated.[190] The court frames the issue as one of competing principles: compensation and deterrence.[191] The majority concludes that the deterrence principle should predominate over the "one-satisfaction" rule.[192] After making that policy decision, the majority then uses economic analysis for two purposes. The first task, as in the *Webster* case,[193] is to demonstrate that the achievement of socially optimal deterrence requires that the defendants pay the full costs of their misconduct. The second purpose is to justify the court's decision to ignore the distributional impact (*i.e.*, the overcompensation of the plaintiff) by asserting that socially optimal deterrence requires that result. Thus the court notes: "A potential tortfeasor's action will probably not be shaped by considerations of whether the injured party will be compensated nearly as much as they will be shaped by considerations of whether the tortfeasor has to pay."[194] Based on that reasoning, the majority concludes that the police officer must pay his share of the damages.

Judge Higginbotham's dissent in *Dobson* also uses economic reasoning, but reaches a different conclusion. First, he argues that the police officer need not actually pay the damages to promote deterrence.[195] The mere threat alone, he says, would be sufficient deterrence and would not be mitigated by a fortuitous settlement.[196] Second, while objecting to the use of economic analysis at all, Judge Higginbotham further asserts that the majority's application of it to support its deterrence rationale is flawed. In his view, the police officer does not receive the benefits that society does from more aggressive law enforcement, so forcing the police officer to internalize the costs may lead to a less than optimal level of law enforcement.[197]

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189. The essence of the rule is that once the victim has been fully compensated for his injuries by one or more tortfeasors, the remaining tortfeasors owe him nothing, no matter how great their fault, absent punitive damages. *Id.* at 763.

190. *See id.* at 768-69.

191. *See id.* at 764.

192. *See id.* at 766.

193. *See supra* text accompanying notes 167-78.

194. 705 F.2d at 770.

195. *See id.* at 772-73 (Higginbotham, J., dissenting).

196. *See id.* (Higginbotham, J., dissenting). In fact, however, Justice Higginbotham's analysis is not quite complete. If the police officer knows that there is a positive probability—no matter how small—of not having to pay for the full consequences of his actions, his decisions will not take into account the full true costs of his behavior.

197. *See id.* at 774-75 (Higginbotham, J., dissenting). Of course, one has to question how much society benefits when aggressive law enforcement entails assaulting captive detainees.

The dialogue on economic reasoning between the majority and the dissent highlights the fact that economic reasoning is not determinative of value choices.[198] The majority chooses deterrence of misconduct as a primary goal, and utilizes economic reasoning to discover how to achieve that end, *i.e.*, it is necessary to make the defendant pay the full costs of the harm produced.[199] The dissenter chooses instead to promote aggressive law enforcement and also utilizes economic reasoning to determine how to reach that goal, *i.e.*, the threat of liability is sufficient deterrence and the internalization of costs to the party not reaping the benefits is too inhibiting.[200] Thus, *Dobson* illustrates a situation in which there are two competing policies, each supported by a different economic argument.[201]

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198. *See supra* text accompanying note 123.

199. *See* 705 F.2d at 770.

200. *See id.* at 774-75 (Higginbotham, J., dissenting).

201. Madison Consulting Group v. South Carolina, 752 F.2d 1193 (7th Cir. 1985), represents the use of a single economic argument to show that the policy choice can go either way. The majority concluded that Wisconsin could assert personal jurisdiction over a nonresident corporation which had initiated a contract with plaintiff, the major portion of which was to be performed in Wisconsin. *See id.* at 1195. In a separate opinion concurring in the result, Judge Swygert argued that a prior Seventh Circuit decision, which the majority upheld but distinguished away, should be overruled. *See id.* at 1208 (Swygert, J., concurring in the result). The prior decision held that a contractual obligation that causes a plaintiff's substantial performance to occur in the forum state is not itself sufficient to give the forum state personal jurisdiction over an out-of-state defendant. Judge Swygert wants to overrule that standard Addressing the usual concerns for fairness to the defendant in such cases, he asserts, "it is difficult to see how a sophisticated merchant who enters interstate commerce by contracting with an out-of-State merchant can be a victim of fundamental unfairness by virtue of the [out-of-State] court's decision to grant jurisdiction solely on the basis of that contract." *See id.* at 1209 (Swygert, J., concurring). Observing that the primary effect of such a rule would force the defendant merchant to internalize the costs of possible litigation in a foreign state, Judge Swygert also recognizes that this economic argument "cuts both ways." *See id.* at n.7 (Swygert, J., concurring). He observes that the opposite rule would force the plaintiff instead to internalize those costs. In fact, he notes, it would be equally burdensome to force either the defendant or the plaintiff to internalize those costs. "[W]hile it is often stated that modern economic developments make it easier . . . to defend suits in foreign States, these same developments make it equally easy for the *plaintiff* to sue the defendant in defendant's home forum." *Id.* (citations omitted). Judge Swygert concludes that it would be equally fair to place the burden on either party. "Absent any transaction costs, it would be just as fair . . . to force the plaintiff, not the defendant, to internalize such costs." *Id.* (citing Coase's article for support).

Judge Swygert goes on to argue that the doctrine defining the constitutional reach of personal jurisdiction requires that the court focus primarily on the fairness to the *defendant*. *See id.* at 1210 n.7. *But cf.* World-Wide Volkswagon Corp. v. Woodson, 444 U.S. 286, 292 (1980) ("Implicit in this emphasis on reasonableness is the understanding that the burden on the defendant, while always a primary concern, will in an appropriate case be considered in light of other relevant factors . . ."). Since it is not *unfair* to place the burden on the defendant, Judge Swygert concludes that doing so cannot be a violation of due process. *See* 752 F.2d at 1210 n.7.

Thus, Judge Swygert uses the economic argument relating to internalization of costs to assist him in determining how to apply a legal doctrine on fundamental fairness. The legal doctrine itself embodies a policy choice, one which focuses on fairness to the defendant rather than the plaintiff. The economic analysis guides implementation of that policy choice even though the economic argument alone (without the policy choice) would support either conclusion.

C. *Policy Choices in Efficiency Clothing: The False Conflict*

Sometimes economic efficiency seems to compete with other policy considerations. The courts may appear to reject economic efficiency as a policy choice. This appearance is deceiving. Economic analysis seeks to discern the different economically efficient states that potentially can be achieved. Once the policymaker selects a particular state, economic reasoning then can be used to determine how to reach that choice as efficiently as possible.[202] Economic efficiency is inextricably tied to economic analysis and therefore a rejection of economic efficiency is in reality a rejection of economic reasoning. However, since economic reasoning is merely an analytical methodology for discovering choices and how best to achieve them, it cannot be rejected as a moral choice. When the courts believe they are rejecting a policy of economic efficiency, they are, in fact, rejecting a particular social choice or value that either explicitly or implicitly underlies that policy.

Excellent examples of this phenomenon include *City of Flagstaff v. Atchinson, Topeka, and Santa Fe Railway (Atchinson)*[203] and *District of Columbia v. Air Florida*.[204] In both cases a municipality brought suit against a tortfeasor to recoup the expenses for rescue and cleanup operations following a catastrophic accident.[205] Both courts rejected the municipalities' claims for damages on the ground that the legislature in each municipality had determined that the costs of these accidents were to be borne by the cities.[206] The municipalities' claims in effect attack economic or fiscal legislation, and therefore the courts used low level rational basis scrutiny.[207] Because the legislative decision to make the city bear the costs is a rational one, each court concluded that even if it could be shown that the tortfeasor

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202. The analysis in Dobson v. Camden, 705 F.2d 759 (5th Cir. 1983), discussed *supra* text accompanying notes 188-201, illustrates this principle well.

203. 719 F.2d 322 (9th Cir. 1983).

204. 750 F.2d 1077 (D.C. Cir. 1984).

205. The *Atchison* case arose from the derailment of a train carrying liquid petroleum gas. The accident required the city to evacuate its residents as far as a mile away. *See* 719 F.2d at 323. The *Air Florida* case resulted from the crash of a passenger jet into the Potomac River near the Washington D.C. area. *See* 750 F.2d at 1078. In *Atchison*, the damages amounted to nearly $42,000 and in *Air Florida* the damages exceeded $750,000.

206. *See Air Florida*, 750 F.2d at 1080 ("It is critically important to recognize that the government's decision to provide tax-supported services is a legislative policy determination."); *Atchison*, 719 F.2d at 324 ("If the government has chosen to bear the cost for reasons of economic efficiency, or even as a subsidy to the citizens and their business, the decision implicates fiscal policy; the legislature and its public deliberative processes, rather than the court, is the appropriate forum to address such fiscal concerns."). The *Air Florida* court explicitly adopted the reasoning and rule of *Atchison*, *see* 750 F.2d at 1080; hence further references will be made to the *Atchison* case only.

207. When the *Atchison* court concludes that the city's allocation of the emergency cost is "neither irrational nor unfair," they seem to refer to the constitutional level of judicial scrutiny to be applied when the issue is an economic one. *See* 719 F.2d at 323. *See generally* 2 R. ROTUNDA, J. NOWAK & J. YOUNG, TREATISE ON CONSTITUTIONAL LAW: SUBSTANCE AND PROCEDURE § 18.3, at 330 (1986) (rational basis test used to review laws or regulations challenged under due process or equal protection guarantees unless "fundamental constitutional right, suspect classification or the characteristics of alienage, sex or legitimacy" involved).

and not the city was the "more efficient cost avoider," the burden could not be shifted to the tortfeasor.[208]

On the surface each court appears to reject economic efficiency in favor of rationality scrutiny. Indeed, it appears that each court rejects economic efficiency because it conflicts with a principle of law. But a closer examination of these opinions reveals that a more subtle choice being made, one that involves a selection from competing values rather than different methods of analysis.

The *Atchinson* court says that even if it possessed the necessary information to assign liability to the more efficient cost avoider, and if that assignment differed from the legislature's choice, the court would not shift the burden to that more efficient cost avoider.[209] Implicit in the court's statement regarding "information to determine the most efficient cost-avoider" lurks the notion of an objective measure that can assess the utility to society of burdening one party as opposed to the other. There are different effects, however, from placing the cleanup burden on one party or the other. For example, if the municipality pays for cleanup, it can spread the risk of cost by taxation of its citizens. On the other hand, if the common carrier bears the responsibility, the effect is to motivate accident deterrence and risk spreading through higher fees for customer services. There is no *objective* measure by which to compare these effects. Valuing one effect over the other is a value choice, one which is necessarily subjective.

Presumably, the courts' discussion of the information that would determine the most efficient cost avoider contemplates using market prices to do so. Therefore, the court must believe that the market prices provide an objective valuation of the effects of choices. Using market prices as a means of making the comparison, however, is not objective. The choice of market prices is itself a value decision to use society's current expression in the marketplace.[210] Thus, when a court refuses to change the burden because to do so differs from the legislature's choice, the court believes it is potentially rejecting the economically efficient choice, when in fact it is not. The court is actually rejecting the value choice implicit in the market's comparison of the two effects and does so in deference to the legislature's evaluation of the competing liability assignments. The legislature may have decided, for example, to place more value on the benefits of subsidization of business in the city in order to stimulate the city's economic growth.[211] In deferring to the legislature's evaluation the court implicitly complies with the operative rule of law requiring the judiciary to leave rational legislative decisions undisturbed.[212]

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208. *See* 719 F.2d at 323-24.

209. *See id.*

210. *See supra* text accompanying notes 117-18.

211. *Cf.* 719 F.2d at 324.

212. Like the courts in *Atchinson* and *Air Florida*, the court in Ira S. Bushey & Sons v. United States, 398 F.2d 167 (2d Cir. 1968), appears to reject economic efficiency in favor of a rule of law. In *Bushey*, a dry dock owner sued the government (as shipowner) for recovery of damages done to the dry dock by a government employee. While the Coast Guard ship was in dry dock, employees slept on board. One evening, an employee returned to the ship inebriated and

opened the dry dock valves, causing the ship to list to the side and do substantial damage to the dry dock. *See id.* at 168. The court addresses whether liability should be assigned on the basis of who is the least expensive accident avoider or on the more traditional grounds of respondeat superior. *See id.* at 170-71. The court notes that the dry dock owner was probably the least expensive accident avoider, *see id.* at 170 n.7, but decides to assign liability to the government because its employee's behavior was reasonably foreseeable within the meaning of the doctrine of respondeat superior, *see id.* at 171-72. Thus, the court appears to reject economic efficiency in favor of an operative rule of law. Again, this is not true. The court merely chooses one policy value over another. In this case it favors the fairness values inherent in respondeat superior over the values served by reducing the risk of accidents. This is not so bald a choice since respondeat superior contains its own aspects of risk reduction. It creates an incentive for the employer to scrutinize prospective employees for propensities toward safe and responsible behavior. The *Bushey* court, however, questions the efficacy of such incentives. *See id.* at 170.

Though this choice appears to contradict what economic efficiency would dictate (*i.e.*, assigning liability to reduce accidents most efficiently), that is a misperception. Economic efficiency analysis does not select accident reduction over respondeat superior principles; economic efficiency analysis merely indicates which party to hold liable *if society wants a policy of accident reduction*. The absence of efficiency considerations with respect to the respondeat superior doctrine does not imply that economic efficiency analysis rejects the doctrine. Respondeat superior is a valid policy alternative to accident reduction. It does not lose validity simply because it does not call for economic reasoning. Thus, the court erroneously infers that its choice of respondeat superior rejects economic efficiency analysis. The choice does not reject economic efficiency, it rejects the policy of accident reduction.

In *Bushey*, *Air Florida*, and *Atchinson*, the courts appear to reject economic efficiency when it is in competition with other policies or legal rules. In Carpenter v. Double R Cattle Co., 105 Idaho 320, 669 P.2d 643 (Ct. App. 1983), *rev'd*, 108 Idaho 602, 701 P.2d 222 (1985), the court seems to do the opposite, that is, it appears to reject an alternative legal principle *in favor* of economic efficiency when the two are in direct conflict. *Double R* involved homeowners who brought suit for damages and injunctive relief against a feedlot alleging that the feedlot's expansion had created a nuisance. *See* 105 Idaho at 321-22, 669 P.2d at 644-45. The Idaho Court of Appeals questioned whether to adopt § 826 of the *Restatement (Second) of Torts*, which provides that injunctive relief can be granted only if the gravity of the harm outweighs the utility of the actor's conduct. *See* RESTATEMENT (SECOND) OF TORTS § 826(a) (1977). However, if the harm is serious but does not outweigh the utility, then the plaintiff is limited to receiving compensatory damages unless the award of such damages itself would cause the defendant business to fail. In that situation, the damages will be for less than full compensation. *See id.* § 826(b). The court notes that the *Restatement*'s guidelines arguably effect a form of private eminent domain in certain situtations. *See* 105 Idaho at 331, 669 P.2d at 654. The *Restatement*'s injunctive and damages remedies accommodate the objective of economic efficiency by allowing an enterprise to continue to operate if its value to society exceeds its harm. *See id.* at 334, 669 P.2d at 656-57. But the *Restatement* also promotes distributive justice by allowing compensation to the individuals harmed by such activities. These goals, however, conflict when full compensation to harmed individuals would terminate a business whose productivity value exceeds the value of the harm. In that case, the *Restatement* permits the firm to stay in business without having to pay full compensation. *See id.*, 669 P.2d at 657. In spite of this distributional inequity, the court adopts the *Restatement* view. It thus appears that the court chooses economic efficiency over distributional justice. In reality, the court implicitly decides to adopt the value choices underlying the *Restatement*'s provisions on injunctive and damage remedies. The value choice implicit in the *Restatement* is the notion that when an enterprise's utility to society (the assessment of which, in itself, is a value choice made by decisionmakers) exceeds the harm (again, the measure of which is determined by a value choice), there will be a redistribution in the form of denying injunctive or full damage relief.

Some might view this decision as a choice of economic efficiency because it appears to be the result of a straightforward cost benefit analysis, but it is not. The court has to evaluate the effects of its decision on each of the disputing parties. In determining the weight to be given these effects, the court must make a comparative evaluation which of necessity incorporates subjective factors. On the surface, the court, by adopting the *Restatement* view, apparently adopts a policy similar to Coase and Posner. The decision not to award full compensation

D. *The Fallacy and Pitfalls of "Economic Determinism"*

The final two cases illustrate the importance of clearly articulating the distinction between social policies and economic efficiency analysis. Because economic efficiency cannot operate without a value choice, every economic efficiency argument implicitly or explicitly embodies a value choice determined by the individual making the argument.[213] The failure to make the choice explicit merely means that a disguised value choice is made in the name of economic efficiency, one that may not be consistent with current societal goals. Calling the value decision "economic efficiency" creates false or misleading choices that might not be made if the policy decision proffered were explicit. In other words, it thwarts meaningful comparison between competing policies. A decisionmaker might give up an important societal goal, believing that economic efficiency requires it; that decisionmaker might not do so if the true value choice underlying the economic efficiency argument were understood. On the other hand, a decisionmaker seeking to disguise a value choice that might otherwise be unpalatable may accomplish that goal simply by couching it as a purely economic efficiency argument. Both decisionmakers commit the fallacy of economic determinism; that is, they proceed as if economic arguments were a neutral policy value.

Judge Posner's writings exemplify this confusion between economic efficiency analysis and policy choices. Both in *United States Fidelity & Guaranty Co. v. Plovidba*,[214] which he appears to decide on purely economic efficiency grounds, and in his commentary[215] on the opinion in *Union Oil v. Oppen*,[216] which he criticizes for bad economic reasoning, Judge Posner

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when a productive firm may be put out of business certainly seems analogous to Coase's railroad scenario, which permits the railroad to cast sparks onto adjacent landowners' property without paying compensation for the damage. *See supra* note 51 and text accompanying notes 46-51. However, the *Double R* court's approach differs because the decisionmaker is not confined to the use of market prices to assess relative harms and benefits. The court notes that factors such as "personal health and safety" as well as "fundamental freedom of action within the boundaries of . . . [one's] own property" play an integral role in measuring the gravity of the harm for purposes of the § 826 balancing test and that these factors ordinarily would favor the granting of injunctive relief. *See* 105 Idaho at 331-32, 669 P.2d at 654. The court further suggests that for those few cases in which injunctive relief under the *Restatement* would not lie—notwithstanding the invasion of health, safety, and fundamental freedom—injunctive relief still might be available. The court states that its adoption of the *Restatement*'s test for nuisance "stops short of being absolute." *See id.* at 332, 669 P.2d at 654-55. This tilt toward concern for distributive justice reflects Coase's caveat that broader social dimensions should enter the solution of economic problems. *See supra* note 120 and accompanying text. However, the *Double R* court looks beyond Coase's generalities and articulates specific factors relevant to achieving those goals and how they will affect the outcomes of such disputes.

The Idaho Supreme Court rejects the lower court's application of the *Restatement*, substituting a Coasian-styled argument which immunizes a nuisance source from liability if the utility of the source's conduct is in "the interests of the community." *See* 108 Idaho 602, 607-08, 701 P.2d 222, 227-28. One dissenting justice particularly emphasizes the need to spread the costs of nuisance by internalizing them in the price of the source's product. *See id.* at 610, 701 P.2d at 230 (Bistline, J., dissenting).

213. *See supra* note 122 and accompanying text.

214. 683 F.2d 1022 (7th Cir. 1982).

215. Posner, *Some Uses and Abuses of Economics in Law*, 46 U. CHI. L. REV. 281, 297-301 (1979).

216. 501 F.2d 558 (9th Cir. 1974).

reveals that he himself is subject to making value choices, albeit subtle ones, in the name of economic efficiency.

In *Plovidba* a longshoreman fell to his death aboard ship after he entered a darkened hold in which a hatch was open.[217] Although his crew was working in the adjacent hold, the longshoreman had no authority to be in the darkened one.[218] The complaint alleged that the shipowner negligently failed to erect barriers or post warnings of danger across the open entryway separating the two holds.[219]

Judge Posner applied the Learned Hand negligence formula[220] to decide *Plovidba*. This formula weighs the cost (labeled B) to the defendant of taking measures to avoid the accident against the "expected harm." The "expected harm" is defined as the actual harm that might occur (L) multiplied by the probability (P) that it will occur, given the failure to take precautionary measures.[221] If the cost of the precautionary measures is less than the expected harm, then the failure to take those measures constitutes negligence.[222] Algebraically, this is written as: failure to take precautionary measures is negligence when $B < P * L$ (where "<" means "less than" and "*" means "multiplied by").

In *Plovidba*, L is high (L equals the loss of life) and B is low (the cost to the shipowner of posting warning signs or barriers in entryways to darkened holds). Judge Posner must find P (the probability of future harm) very small if he wishes to avoid assigning liability to the shipowner.[223] In his probability analysis, Posner makes three behavioral assumptions. First, the decedent returned to the darkened hold to steal. Second, this behavior in longshoremen is aberrant.[224] Third, Posner assumes (without stating) that longshoremen and shipowners are in equal bargaining positions. This assumption is essential for his market analysis that concludes that the shipowner's decision not to undertake any precautions was proof in itself that the decision was not negligent.[225] Although some evidence supported

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217. Each hold has several vertical levels, each of which is separated from the level above by a hatch. When the hatch is closed it becomes the floor the longshoremen walk upon while loading cargo onto that level. When the hatch is open, the level below is accessible for loading. In *Plovidba*, when the hold was completely loaded, the shipowner left the hold dark and all but the top hatch open. The decedent entered the hold and fell to his death through the open hatches. *See* 683 F.2d at 1023.

218. *See id.* at 1028.

219. *See id.* at 1024.

220. *See* United States v. Carroll Towing Co., 159 F.2d 169 (2d Cir. 1947), in which Judge Learned Hand first articulated his famous economic balancing test.

221. Since the probability of an accident occurring is always less than 1, the value of the "expected harm," that is, the value of the harm multiplied by its probability, is always less than the value of the harm if it actually occurred. The degree to which the expected harm is less than the actual harm depends on the probability of the accident occurring. The smaller the probability is (or is perceived to be), the smaller the calculation of the expected harm is relative to the actual harm when it is applied in the Learned Hand formula.

222. *See* 159 F.2d at 173.

223. *See* 683 F.2d at 1027-28.

224. *See id.* at 1028.

225. Judge Posner argues that when the shipowner makes a decision whether to undertake the burdens of avoiding a specific risk of harm to longshoremen, the shipowner is faced with two choices. He must either take action to avoid the risk of harm or, in response to market forces, compensate the longshoremen for the increased risk of expected harm that results

the assumption that the longshoreman was stealing,[226] little evidence supported the belief that the probability of theft was so small as to be negligible.[227] No evidence supported the validity of Posner's implicit assumption of equal bargaining power between the longshoremen and the shipowner.[228]

Presumably, Judge Posner chose the Learned Hand formula to achieve the appearance of neutral economic reasoning. The formula is a paradigm of cost-benefit analysis, a type of economic reasoning frequently applied to policy questions.[229] In Judge Posner's discussion of efforts by other courts to grapple with negligence standards, he implies that their analyses are mired in confusion.[230] Judge Posner offers the Learned Hand formula as "a valuable aid to clear thinking about the factors that are relevant to a judgment of negligence and about the relationship among those factors."[231]

In fact, the cost-benefit approach in general and the Learned Hand formula in particular are not the dispassionate inquiry into the "relevant factors" that Judge Posner suggests. In applying the formula he had to make a number of assumptions that are in fact value choices.[232] In addition, the choice of the formula implies a value choice since the Learned Hand formula is only one available means for assessing negligence in order to determine accident liability. The courts use a variety of approaches to determine third party negligence: the foreseeable harm analysis,[233] a policy of accident minimization,[234] and assignment of liability to the least-cost accident avoider.[235]

The least-cost accident avoider approach seeks to avoid accidents at

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from not doing so. If the costs of avoiding the harm are greater than the cost of the increased compensation, the shipowner will prefer to pay the increased wages. If the costs of avoiding the harm are less, then the shipowner will choose instead to undertake the precautionary measures. Judge Posner argues that since the shipowner in *Plovidba* chose not to undertake the precautions, the costs of doing so must have exceeded the cost of the increased wages and therefore the expected harm. Since the cost of the precautionary measures (B) exceeded the expected harm (P*L), Judge Posner concludes that under the Learned Hand formula the shipowner is not to be found negligent. *See id.* at 1029. *But see infra* note 228 and accompanying text (describing problems underlying Posner's analysis).

226. *See id.* at 1028.

227. Judge Posner asserts that the probability that a longshoreman would steal is so infinitesimally small that it need not be taken into consideration by the shipowner. However, the Author's casual survey of colleagues returning from Europe whose shipped automobiles invariably arrive with their radios missing suggests that Judge Posner's assessment of the probability of the occurrence of certain characteristics is unrealistic. *Cf.* Ira S. Bushey & Sons, Inc. v. United States, 398 F.2d 167, 171 (2d Cir. 1968) (discussing employer's need to consider characteristics of seamen and risks of injury inherent in working environment).

228. Judge Posner's argument presupposes that the longshoreman and the shipowner hold roughly equal bargaining positions; that is, it presupposes that the longshoreman can effectively negotiate for higher wages to compensate for the increased harm. This is a highly suspect assumption for which Judge Posner provides no evidentiary support.

229. *See generally* C. GOETZ, CASES AND MATERIALS ON LAW AND ECONOMICS 292-374 (1983).

230. *See* 683 F.2d at 1025.

231. *See id.* at 1026.

232. *See supra* notes 224-28 and accompanying text.

233. *See* Ira S. Bushey & Sons v. United States, 398 F.2d 167, 171-72 (2d Cir. 1968).

234. *See* Nelson v. United States, 639 F.2d 469, 475, 478 (9th Cir. 1980).

235. *See Bushey*, 398 F.2d at 170-71.

the least cost to society by combining a policy of accident minimization with cost-benefit analysis.[236] It assigns liability to the party who can more cheaply avoid the accident. The approach represents an effort to sustain incentives to keep accidents down.[237] If Judge Posner had chosen the economic approach of least-cost accident avoidance, the choice likely would have altered the outcome of *Plovidba*. Since the shipowner's cost of erecting barriers to prevent entry (such as locked doors) is trivial compared with the cost to the stevedore of providing equal assurance (for example, through increased security staff) that no longshoremen will wander into unseen dangers, the shipowner would be found liable.[238] Thus Judge Posner's economic approach to negligence is not unique; other equally economically efficient approaches to determining negligence exist. The approaches differ not in the degree of economic efficiency but, as demonstrated in the *Plovidba* case, in the identity of the party who bears the costs of the risk of harm (the shipowner or the longshoreman).

Clearly, Judge Posner's use of the Learned Hand formula does not lead to an economically determinative judgment. To the contrary, it can be seen once more how efficiency analysis can support opposite conclusions; the value choice made initially determines what conclusion will be reached. In determining the test for negligence, any legal standard incorporating economic efficiency also must embody the value choice of who is to bear the risk of harm.[239] The value choices implicit in the economic argument must be unmasked if the courts are to make informed choices.

Posner's criticism[240] of *Union Oil Co. v. Oppen*[241] forcefully drives home the dangers stemming from the fallacy of economic determinism, and the importance of distinguishing between value choices and economic reasoning. Posner frames his criticism as an objective evaluation of the powers of

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236. *See* G. CALABRESI, *supra* note 159, at 35-129.

237. *See* Latin, *Problem-Solving Behavior and Theories of Tort Liability*, 73 CALIF. L. REV. 677, 688-93 (1985); Shavell, *Strict Liability Versus Negligence*, 9 J. LEGAL STUD. 1, 2-3, 7-8 (1980).

238. This is not to say that the least-cost accident avoider approach would lead to a different efficient outcome. Both under the least-cost accident avoider doctrine and the Learned Hand formula, the shipowner would still face the same economic decision, to wit, whether to undertake the burden of avoiding the accident or to pay for the expected harm (either through higher wages or through liability in the event of an accident). If the cost of the burden exceeds the expected harm, the shipowner will choose not to undertake the burden under either policy. If the Learned Hand formula applies, the shipowner will choose not to undertake the burden because he will be found not negligent and therefore not liable. Under the least-cost accident avoider theory, the shipowner will *still* not undertake the burden because even though he is still liable for the harm, the expected costs for such liability is less than the costs of the burden. Thus, under either policy, the shipowner will make the same economic efficiency decision with respect to avoiding the harm. The only difference between the two policies is whether, if the accident occurs, the shipowner pays for the harm.

239. For example, the value embodied in the Learned Hand formula (as applied in *Plovidba*) incorporates the decision to hold the shipowner free of liability if an economically efficient choice is made concerning the level of risk to which the shipowner exposes the plaintiff. *See Plovidba*, 683 F.2d at 1026. On the other hand, the least-cost accident avoider approach, which seeks to maintain incentives to further reduce the risk of accidents, assigns liability to the shipowner even if it chooses to expose plaintiff to an economically efficient level of risk. *See supra* note 238.

240. Posner, *supra* note 215, at 297-301.

241. 501 F.2d 558 (9th Cir. 1974).

economic reasoning of the opinion's author, Judge Sneed. In fact, close examination uncovers the value conflict that forms the core of the disagreement between Posner's and Sneed's approaches.

In *Union Oil* a spill by the oil company destroyed much aquatic life off the Santa Barbara coast and thereby seriously reduced the expected future income of commercial fishermen. Plaintiffs sought recovery for the loss of a prospective economic advantage.[242] The defendants argued that this form of recovery would subject them to unforeseeable claims based on remote and speculative injuries.[243] The court imposed liability based on principles of admiralty law[244] (fishermen are special seamen and have the right to recover future economic losses) and on the ground of foreseeability of the risk of pollution to the environment.[245]

Although the court rests its decision on legal principles, Judge Sneed turns to economic analysis to buttress the panel's decision. He cites both Calabresi and Coase to support his argument that tort liability should be assigned so as to achieve, as closely as possible, the optimal allocation of resources. Judge Sneed characterizes this optimum as the one achieved by "a perfect market system." That economic approach "requires the court to fix the identity of the party who can avoid the costs most cheaply. Once fixed, this determination then controls liability."[246]

Judge Sneed apparently believes that a single economically efficient allocation of resources exists, and that the least-cost accident avoider approach brings society closest to that allocation. His opinion serves to indicate how strong the impression is among jurists that only one optimal allocation of resources exists and that it is economically determinative. But, as previously discussed, more than one economically efficient choice exists, each embodying different value choices.[247] Judge Sneed's choice of the least-cost accident avoider approach emphasizes the value of minimizing the probability of accidents. An alternative choice might have been a policy that encourages oil exploration and development. In that case, an economically efficient policy permits plaintiffs to recover only if they could demonstrate that defendant did not take prudent care, an analysis reminiscent of the Learned Hand approach[248] or the Coase-Posner total product rule.[249] This is not to suggest that Judge Sneed's approach is more or less preferable. Rather, the observation serves as a reminder that different value choices exist, that Judge Sneed made one, and in fact had to make one before he could apply economic efficiency analysis to implement it.

Recognition that different policies often call for different economic reasoning and remedies provides for a better understanding of Judge (then

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242. *See id.* at 563.
243. *See id.*; *see also* W. PROSSER & W. KEETON, *supra* note 19, at 1008 (discussing general principle that denies damages for loss of prospective economic advantage).
244. *See* 501 F.2d at 567.
245. *See id.* at 568-69.
246. *See id.* at 569.
247. *See supra* note 238 and accompanying text.
248. *See supra* notes 220-21 and accompanying text.
249. *See supra* text accompanying notes 37-57.

Professor) Posner's somewhat acerbic commentary on *Union Oil* in a law review article.[250] While Posner's analysis of Judge Sneed's opinion is couched as criticism of Judge Sneed's economic reasoning powers,[251] what Posner really disagrees with are Judge Sneed's value choices.[252] For example, Judge Sneed does not want to assign liability to "such groups as consumers of staple groceries" who are not involved with either oil or fish production.[253] Posner finds the concern confusing and the justification obscure. Posner notes that "there is no tort mechanism by which the manufacturers, sellers, or consumers of staple groceries could be made to bear the costs of the Santa Barbara oil spill."[254] Posner confesses that he does not understand how imposing liability on defendants will still impose some costs on these groups.[255]

Judge Sneed obviously recognizes that the *Union Oil* situation really involves three groups: the plaintiffs, the defendants, and the rest of society that may draw pleasure from the Santa Barbara coast. The court wishes to avoid "assigning liability" to the third group, because the members of that group cannot assist in avoiding the accident but nonetheless will bear some of the accident's costs.[256] Posner fails to see that not assigning liability to one party effectively assigns liability to the others. If the defendants escape full liability, then by default the rest of society bears the costs of the accident. This holds true whether plaintiffs and the rest of society explicitly bear the costs by paying higher taxes to repair the damage,[257] or whether they bear the costs implicitly through the loss of the use of the Santa Barbara Channel and beaches. Judge Sneed correctly perceives that the outcome of *Union Oil* does not prevent the rest of society from bearing part of the loss, because the action involves only the compensation of fishermen for forgone profits.[258] Whatever pleasure third parties have lost, such as pleasant beaches and clean swimming areas, goes uncompensated. Thus, Judge Sneed expresses the court's value choice: the minimization of costs that the rest of society will have to bear.

Posner also objects, on the grounds of unsound economic reasoning,[259] to the court's justification that "the loss should be allocated to that party who can best correct any error in allocation . . . by acquiring the activity to which the party has been made liable."[260] His objection is particularly interesting because the court's statement represents reasoning which is in fact quite sound but that advocates a policy prescription in direct

250. *See* Posner, *supra* note 215, at 297-301.
251. *See id.* at 297.
252. Notably, Judge Posner states that he concurs with Judge Sneed's result even though not with Judge Sneed's analysis. *See id.* at 300. As will become apparent, Posner's statement does not diminish my critique here.
253. *See Union Oil*, 501 F.2d at 569-70.
254. *See* Posner, *supra* note 215, at 299.
255. *See id.* at 299-300.
256. *See* 501 F.2d at 570.
257. Not unlike the choice to have municipal taxpayers bear the cost for rescue and clean-up of catastrophic accidents. *See supra* text accompanying notes 206-12.
258. *See* 501 F.2d at 570.
259. *See* Posner, *supra* note 215, at 300.
260. *See* 501 F.2d. at 570.

opposition to Posner's own (*i.e.*, his version of the total product rule).[261] Recall the discussion of Coase's railroad allegory which addressed the economic efficiency issues of the railroad buying the farmer's land. The economically efficient outcome dictates that the harming party compensate the harmed party for the losses incurred. Efficiency, however, also requires that losses be minimized. In the railroad example, minimizing the losses means that the farmers do not employ society's resources to produce crops that would be destroyed anyway. Optimally the farmers should not plant crops and the railroad should have to compensate the farmers only for their forgone profits. The present value of the forgone profits over time determines the value of the land. Thus, purchasing the land from the farmer is the economic equivalent of the railroad compensating the farmer for forgone profits in every time period.[262]

Clearly, purchasing the land falls into the category of "buying out" the other party. At least in a commercial context, the party who earns the greatest profit from a resource is the one who will find it more useful. Being the more profitable user, the party also is more capable of buying the right. The question is whether this justifies assigning the liability (and not the right) to the party more capable of buying it anyway. Once the problem is distilled in this fashion, it is easy to recognize that Posner already expressed his opinion on this issue. He believes that the right (and not the liability) should be assigned to the party who would have purchased the right anyway.[263] His justification is that this ensures that the party who will use the right more efficiently will have it.[264] Relying on Calabresi,[265] Judge Sneed chooses an opposite rule, that is, to assign the liability (and not the right) to the party who would have purchased the right.[266] This choice is equally valid from an economic standpoint because (in the presence of transactions costs) that party is just as likely to ultimately use the right as efficiently (through purchase) as it will when assigned the right.[267] The choice between the two is one of wealth distribution and equity, not economic efficiency.[268] The ultimate question in this case is who will own and control the value of the environment, not how to use it efficiently. Posner's policy prescription would dictate that the oil companies own and control the environment. Judge Sneed's court clearly supports different distributional values: "[T]he public's deep disapproval of injuries to the environment and the strong policy of preventing such injuries, all point to the existence of a required duty."[269] Though Posner may have problems understanding the economic reasoning of the *Union Oil* court, his critique stems ultimately from his basic disagreement with economic reasoning processes that proceed from value premises that are different from his own.

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261. *See supra* text accompanying notes 52-58.
262. *See supra* text accompanying notes 78-81.
263. R. POSNER, *supra* note 10, at 45.
264. *See supra* note 57 and accompanying text. The merits of this position have been discussed in the previous section. *See supra* text accompanying notes 58-102.
265. G. CALABRESI, *supra* note 159, at 69-73.
266. *See* 501 F.2d at 570.
267. *See supra* notes 61, 83 and accompanying text.
268. *See* 501 F.2d at 569.
269. *See id.*

CONCLUSION

This Article contains an examination of the role that economic analysis can play in assisting the judicial process. Economic analysis is a reasoning tool that can assist in, but is separate from, the process of making value choices. Not only can economic reasoning reveal policy choices, both of an economic and noneconomic dimension, but it also can help advance selected policy goals more effectively. Thus, economic analysis does not, and indeed cannot, dictate policy choices.

As a springboard to demonstrate the truth of these assertions, this Article scrutinizes a policy recommendation that has gained widespread attention both in the scholarly and judicial arenas. This approach, referred to here as the Coase-Posner total product rule, claims to select resolutions to disputes that are economically dictated. This Article analyzes the Coase-Posner total product rule in two contexts. On one level, a careful economic analysis shows that the policy does not in fact promote economic efficiency as its proponents maintain. In addition, a functional analysis of the total product rule indicates that the rule masks a value system rather than providing the unbiased approach to dispute resolution that its authors claim. A legal-economic analysis of cases citing Coase demonstrates that most courts intuitively use economic reasoning properly: to discern and effectuate policy choices. This exposition affirms for the legal community that economic analysis can be a useful tool—one that need not be steeped in any particular value system that the potential user does not share.