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Economic Analysis in the Courts: Limits and Constraints

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INTRODUCTION

For many years judges have sought alternative methods for judicial decisionmaking. Since the 1800's, courts of review have turned to methods such as using natural law, historical development, and public policy to determine the outcome of constitutional, statutory, and common law cases.¹ In contrast to the limits of traditional stare decisis, these methods allow a judge to create an outcome when the precedent or statutes are inadequate.² In 1947 Judge Learned Hand formulated a new approach to decisionmaking by using an algebraic cost-benefit test for determining negligence.³ Since then, few judges have adopted Judge Hand's economic theory for use in court; however, beginning in the 1960's the notion of law and economics has grown steadily in academia.⁴ Many would argue that academia is insulated from the reality of legal development, and the viability of law and economics will ultimately be developed by its use in the courts. This Note will analyze the practicality of economic analysis in judicial decisionmaking by looking at its actual use in the courts.

The use of economics in judicial decisionmaking became a controversial issue when law professor Richard A. Posner published the first edition of his book *Economic Analysis of Law* in 1972.⁵ Judge Posner has advocated the use of economic theory in all aspects of the law, including the interpretation and creation of law by judges.⁶ Posner uses both positive and normative arguments in advancing his theory of law and economics.⁷ In short, Posner argues that wealth maximization can be used to explain the development of

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7. See P. Asch & R. Seneca, *Government and the Marketplace* 4 (1985) (Positive economics is the systematic description of real-world economic relationships while normative economics is the evaluation of the economic "state of the world.").
the law and is a desirable and workable principle for the creation of law.\textsuperscript{8}

Posner has been the subject of both praise and criticism for his novel applications of economic analysis.\textsuperscript{9} The resulting law and economics debate has focused on the viability of economic theory as a tool for judicial use in deciding actual cases. Posner advocates the use of economic analysis in judicial decisionmaking as a "new style" of opinion writing.\textsuperscript{10} This coincides with his belief that the law has become more interdisciplinary and thus should include economists, statisticians, and other social scientists in law reform.\textsuperscript{11} Posner further contends that economic analysis offers lawyers and judges a better method for interpreting the increasing amount of statutory law where conventional training in judge-made law is inadequate.\textsuperscript{12}

In order to discover the viability of economic analysis in judicial decision-making, this Note will analyze and classify Posner's first 300 opinions published during his first four years on the bench. Posner has written over 600 opinions since his appointment to the Seventh Circuit Court of Appeals in December 1981. This Note is not intended as an exhaustive analysis of Posner's career as a judge but rather to compare his academic writings with his early judicial opinions to determine the applicability of theory to practice. His opinions are analyzed for their use of economic analysis and then classified according to the subject matter of the case and the level of economic analysis applied.

\textsuperscript{8} See Samuels & Mercuro, supra note 6, at 107 (Wealth maximization is both the explanation of law and rights and what ought to be the basis for the development of law and rights.); see also Posner, Some Uses and Abuses of Economics and Law, 46 U. Chi. L. Rev. 281, 294 (1979) [hereinafter Posner, Some Uses and Abuses] ("At least one can say that the theory deserves to be taken seriously, especially in its more moderate form of a claim that efficiency has been the predominant, not sole, factor in shaping the common-law system."); Posner, Wealth Maximization and Judicial Decision-making, 4 Int'l Rev. L. & Econ. 131, 132 (1984) [hereinafter Posner, Wealth Maximization] (Wealth maximization means "using cost-benefit analysis as the criterion of social choice, where the costs and benefits are measured by the prices that the economic market places on them, or would place on them if the market could be made to work.").


\textsuperscript{10} Posner, The Decline of Law as an Autonomous Discipline: 1962-1987, 100 Harv. L. Rev. 761, 778 (1987) [hereinafter Posner, The Decline of Law]. Posner suggests that "formalistic crutches—such as the canons of statutory construction and the pretense of deterministic precedent" should be replaced with "a more candid engagement with the realistic premises of decision," for example, economic analysis. Id.

\textsuperscript{11} Id. (Economists, statisticians, and other social scientists should have a prominent role in revising "federal sentencing, . . . the Federal Rules of Civil Procedure, the Bankruptcy Code, the tax code, and tort law.").

\textsuperscript{12} Id. at 777 (The aging of the Constitution and the expansion of statutory law relative to common law requires a new approach to interpretation.).
Part I of this Note outlines the basic theoretical elements of Posner's economic analysis in several substantive areas of the law. Part II describes the criteria used to categorize Posner's decisions and presents the results of the analysis in table form by year, case classification and level of economic analysis used. Part III of this Note compares the results of the analysis to Posner's theories discussed in Part I. Part IV discusses the limitations and constraints on the use of economic analysis in the opinions and suggests reasons for the resulting level of economic analysis.

The level of economic analysis used in Posner's judicial opinions will be used to determine to what extent it is a useful tool for judicial decisionmaking. By analyzing the use of economic analysis by one of the strongest and most able advocates of the law and economics movement, this Note will evaluate the feasibility of the use of economic analysis by other judges. This Note does not address Posner's ideological motivations or agenda for using economic analysis in his opinions.

I. POSNER'S THEORY OF ECONOMIC ANALYSIS OF LAW

A. Fundamental Concepts of Economic Analysis

Judge Posner points out that the domain of economics is much broader than most lawyers perceive.13 Posner perceives economics as the science of rational choice in a world in which resources are limited in relation to human wants.14 The three fundamental principles of economics Posner cites are: the inverse relation between price charged and quantity demanded;15 the presumption that all consumers and sellers try to maximize utility;16 and that resources tend to gravitate toward their most valuable uses in a free market.17 The following sections explain how Posner applies fundamental economic theory to fourteen substantive areas of law.

B. Common Law

An economic explanation has been articulated by Posner for almost every area of the common law. Posner's definition of common law, for the purpose

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13. R. POSNER, ECONOMIC ANALYSIS OF LAW 3 (3d ed. 1986) ("Many lawyers think that economics is the study of inflation, unemployment, business cycles, and other mysterious macroeconomic phenomena remote from the day-to-day concerns of the legal system.").

14. Id. ("The task of economics, so defined, is to explore the implications of assuming that man is a rational maximizer of his ends in life, his satisfactions—what we shall call his 'self interest.'").

15. Id. at 4. As the price of a good increases, the demand for that good decreases and vice versa.

16. Id. at 5. For example, sellers try to maximize the difference between cost and selling price.

17. Id. at 9 ("By a process of voluntary exchange, resources are shifted to those uses in which the value to consumers, as measured by their willingness to pay, is highest.").
of economic analysis, is law created by judges primarily in the process of
deciding cases rather than by legislation. This definition of common law
encompasses the substantive areas of property law, contract law, and the law
of torts. Criminal law fits within the common law as a subcategory of tort
law, although criminal law has independent characteristics that require
additional analysis.

1. Property

Posner’s theory for property law is based on efficiency and wealth maxi-
mization. Implicit in the law of property is the right to exclude others from
using a resource. Value is maximized if every valuable resource is owned
by someone with the unqualified power to exclude others from using it and
with the right to transfer ownership freely. By allowing mutually exclusive
rights to the use of resources, individuals will have an incentive to improve
and maximize the value of the resource. However, if the costs of transferring
ownership are too high, the exclusive right to a resource may reduce effi-
ciency. Nevertheless, an individual owner will not have an incentive to use
property efficiently without some assurance of legal protection.

2. Contract Law

Contract law is explained by Posner as creating an incentive for fulfilling
the terms of a bargain. According to Posner, the fundamental functions of
contract law are to deter contracting parties from opportunistic conduct, to
encourage efficient timing of economic activity, and to avoid costly self-

18. Id. at 29.
19. Id. The law of contracts facilitates the voluntary movement of property rights to those
who value them most. The law of torts protects property rights including the right to bodily
integrity. Id.
20. Id. (Criminal law can be thought of as a specialized subcategory of the three fundamental
fields, especially tort law.).
21. See infra note 125.
22. R. Posner, supra note 13, at 30 (Without property rights, there is no incentive to incur
the cost of developing land because there is no reasonable assurance of reward for incurring
them.).
23. Id. at 31. The creation of exclusive rights is a necessary condition for the efficient use
of resources. The rights must be transferable. Efficiency requires a mechanism by which the
landowner can be induced to transfer the property to someone who can use it more productively.
Posner uses the example of a bad farmer and suggests that the transferable property right is the
efficient mechanism. Id.
24. Id. at 30.
25. Id. at 32-33 (The transaction costs of effecting a transfer of rights can often be
prohibitive.).
26. Id. at 30 (This economic principle applies not only to land but to all valuable resources.).
Contract law achieves the above functions through the remedy of damages. Posner lists eight possible varieties of damages, from the least severe (reliance damages), to the most severe (criminal sanctions). The objective is to fit the level of the damage remedy with the magnitude of the breach. Remedies are central to the policy of contract law; the law is not intended to compel adherence to contracts but rather to require the parties to choose between performance and payment of damages. Thus, economic explanations for contract law can be reduced to a cost-benefit analysis by the parties to a contract in terms of whether to perform or breach.

3. Tort Law

In Posner's view, tort law is among the more promising areas for application of economic analysis. Given that all individuals take some form of precaution to avoid accidents, Posner poses the question: How extensive are the precautionary measures taken? In order to determine if an injurer was negligent, Posner refers back to the negligence formula of Judge Learned Hand. The Hand formula balances the probability of loss or injury (P), multiplied by the cost or magnitude of the loss (L), against the cost of preventing the accident (B). If the burden is less than the product of the probability and the loss, then the injurer would be negligent. In decisionmaking, the judge estimates the cost of accident avoidance in terms of the "reasonable person," rather than the individual before the court. Although the Hand

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27. Id. at 81.
28. Id. at 105. Eight possible remedies for breach of contract in order of increasing severity are: the promisee's reliance loss, the expectation loss, liquidated damages, consequential damages, restitution, specific performance, a money penalty specified in the contract, and criminal sanctions. An additional remedy is self-help. Id.
29. Id. at 105-06 (Severe sanctions are costly to impose, so that the lightest sanction necessary to deter such conduct in the future is the most efficient.).
30. Id. at 106 & n.1. Posner quotes Oliver Wendell Holmes: "The duty to keep a contract at common law means a prediction that you must pay damages if you do not keep it,—and nothing else." Holmes, The Path of the Law, 10 HARV. L. REV. 457, 462 (1897).
31. R. Posner, supra note 13, at 147 (In most situations where the loss is significant, an individual will balance such a loss multiplied by the probability of the loss against the cost of preventing the loss.).
32. Id. at 148 n.1. See United States v. Carroll Towing Co., 159 F.2d 169, 173 (2d Cir. 1947) (the first use of Judge Learned Hand's negligence formula).
34. Id. at 148.
35. Id. at 151-52. This is because it would be too costly to estimate the avoidance cost on an individual basis. Where differences in the capacity to avoid accidents can be estimated at a low cost, the courts do recognize exceptions to the reasonable man standard. Id.
formula is relatively recent, the method it encompasses traces back to the first cases adopting negligence as a standard in accident cases.

Two potential problems with the Hand formula are risk neutrality, and the requirement that costs on both sides of the equation be compared at the margin. Furthermore, Posner concedes that in using the Hand formula, it is rarely possible to quantify the terms of the formula. Therefore, while tort law is conducive to economic analysis, its use in deciding cases requires substantial care in assessing costs and probabilities.

4. Criminal Law

Criminal law is explained by Posner in much the same terms as tort law. The potential criminal is compared to the potential injurer in tort law. Posner explains that a person commits a crime because the expected benefits of doing so exceed the expected costs. The benefits may be tangible in the case of pecuniary gain or intangible when the gain is satisfaction from the criminal act. The costs to the criminal primarily include the expectation of criminal punishment and the opportunity cost of the criminal's time in presumably

36. Id. at 148. See supra note 32.
37. R. Posner, supra note 13, at 150. See Adams v. Bullock, 227 N.Y. 208, 125 N.E. 93 (1919) (defendant trolley company not negligent in placing power wires above tracks because the probability of a person getting shocked was low); Blyth v. Birmingham Water Works, 11 Exch. 781, 156 Eng. Rep. 1047 (1856) (water company not negligent for failure to bury water pipes that burst and damaged the plaintiff’s home).
38. R. Posner, supra note 13, at 150. Risk neutrality in this context is the proposition that all individuals are assumed to be equally in a position to cover the cost of an accident. However, Posner discounts this objection by pointing out that individuals can buy insurance. Id.
39. Id. at 148-49. Measuring costs and benefits at the margin means measurement in the range where investing one more dollar in the cost of prevention will still yield a dollar or more reduction in the cost of accidents. At the extremes, an additional dollar may yield only a small increase in safety. Fortunately, according to Posner, the common law method facilitates the marginal approach. Id.
40. Id. at 518. Even though it is difficult to quantify the probability of an event occurring or the cost of avoiding an accident, Posner contends that the formula is valuable even when used qualitatively. See Sutton v. City of Milwaukee, 672 F.2d 644, 645-46 (7th Cir. 1982) (Due process does not require a deprivation hearing for the owner of an illegally parked car.). See also Mathews v. Eldridge, 424 U.S. 319 (1976) (The Supreme Court, in reviewing an administrative adjudication for alleged government deprivation, uses a balancing test similar to the Hand formula to determine how much due process to which an individual is entitled.); cf. Moisan v. Loftus, 178 F.2d 148, 150 (2d Cir. 1949) (Judge Learned Hand in discussing the viability of his economic formula for negligence states, “In conclusion we cannot help observing that, not only are the inherent uncertainties great in applying such a formula, but that they are greater for the court of another jurisdiction, which cannot have the assurance that comes to those who have themselves framed the terms which they later construe.”). See, e.g., Mashaw, The Supreme Court's Due Process Calculus for Administrative Adjudication in Mathews v. Eldridge: Three Factors in Search of Theory of Value, 44 U. Chi. L. Rev. 28, 30 (1976).
41. R. Posner, supra note 13, at 205.
42. Id. at 206.
legal conduct or employment. Although it is unrealistic to expect uneducated criminals to be rational calculators of costs and benefits, Judge Posner cites a growing literature on crime that shows criminals do respond to changes in opportunity costs, in the probability of arrest, and in the severity of punishment as if they were rational calculators.

C. Public Regulation of Markets

Administrative regulation relies on the public sector to prevent injury in the first place rather than the common law method of compensating victim’s injuries. Posner contends that regulation should only replace common law where common law cannot provide sufficient incentives for efficient conduct. Although regulation may be more efficient than the common law in some circumstances, it tends to be more costly. The following four sections outline Posner’s approach to specific areas of public regulation.

1. Antitrust Law and Monopoly

Economic analysis is an integral part of antitrust law. Unlike the common law area, where the law can be explained in economic terms, antitrust law derives from economics. It is Posner’s belief that some courts do not understand economic competition policy as well as they understand the common law. Some judges think competition means rivalry, but to an economist competition “means the allocation of resources that is brought about when prices are not distorted by monopoly.” One threat to competition is the cartel, a group of competing sellers who contract to fix the price

43. Id. at 205-06 (The costs to the criminal could also include expenses for guns, burglar tools, masks, etc.).
44. Id. at 206 (Criminals are often uneducated and not all crimes have a pecuniary gain that can be calculated.).
46. R. Posner, supra note 13, at 343. The essential characteristics of common law (excluding criminal law) regulation are reliance on private citizens, victims, and their lawyers rather than public officials and incentives to obey the law created by the threat of having to compensate victims for the harm done by violating the rules. In contrast, direct or administrative regulation relies on public officials and attempts to prevent injuries rather than to compensate victims. Id.
47. Id. at 344 (For example, in tort law the incentives for efficient conduct are insufficient when the victim’s damages are too small, as the cost of litigation would be prohibitive.).
48. Id. at 345 (Regulation is more costly because it is continuous and also because it tends to be more politicized than common law.).
49. Id. at 269-70.
50. Id.
of the product they sell.\textsuperscript{51} When monopoly profits and substitution effects are considered, the costs to the consumer outweigh the gain to the cartel members.\textsuperscript{52} Seven economic characteristics are identified by Posner which indicate a market's predisposition toward price fixing.\textsuperscript{53} Posner believes that court enforcement of the Sherman Antitrust Act\textsuperscript{54} against cartels and conspiracies has focused more on legal issues, such as proving an agreement to fix prices, than it has on the economic issue of proving the effects of the sellers' conduct on price and output.\textsuperscript{55} It is important in antitrust law to be able to identify whether a firm or firms have monopoly power.\textsuperscript{56} In order to estimate monopoly power, formulas and market analyses are applied.\textsuperscript{57} The analysis includes the following important factors: the market elasticity of demand, the market share of the firm or firms, the elasticity of supply of other firms, and the market demand and supply elasticities.\textsuperscript{58} Moreover, a monopoly creates inefficiency by depriving the consumer of the competitive price and replacing it with the monopoly price.\textsuperscript{59} The potential monopolist is compelled by antitrust law to choose between monopolizing a market and paying damages to everyone hurt by the monopoly.\textsuperscript{60} The damages include the costs to consumers who continue to buy at monopoly prices and those who were compelled to buy inferior goods as substitutes.\textsuperscript{61}

2. Labor Law

Labor law can be explained in economic terms, although the current state of labor law under the National Labor Relations Act (NLRA)\textsuperscript{62} is in part

\begin{itemize}
\item \textsuperscript{51} Id. at 265.
\item \textsuperscript{52} Id. (Substitution effects arise when the consumer is compelled to buy inferior goods in reaction to the higher monopoly prices.).
\item \textsuperscript{53} (1) The number of (major) sellers
\item (2) The homogeneity of the product
\item (3) The elasticity of demand with respect to price
\item (4) The condition of entry
\item (5) The relative importance of price versus nonprice competition
\item (6) Whether the market is growing
\item (7) The structure of the buying side of the market
\item Id. at 267-68.
\item \textsuperscript{54} Sherman Act, 15 U.S.C. §§ 1-7 (1982).
\item \textsuperscript{55} R. Posner, \textit{supra} note 13, at 267 ("[T]he smoothly functioning cartel is less likely to generate evidence of actual agreement . . . . The completed conspiracy often escapes attention.").
\item \textsuperscript{56} Id. at 279. The inquiry is sometimes simple: "If there is one firm in the market, it has monopoly power; if the firms in the market act as one through collusion, they jointly have monopoly power." On the other hand, "[O]ften it is unclear whether a firm . . . . has monopoly power . . . ." Id.
\item \textsuperscript{57} Id. at 280.
\item \textsuperscript{58} Id. at 281 (However, Posner concedes that the estimation of market demand and supply elasticities "rely on extremely crude proxies, summed up in the concept of product and geographical market.").
\item \textsuperscript{59} Id. at 295.
\item \textsuperscript{60} Id. at 293 ("And to make him do that we have to set damages equal to the total, not net, social costs of the monopoly.").
\item \textsuperscript{61} Id. See supra note 52.
\item \textsuperscript{62} National Labor Relations Act, 29 U.S.C. §§ 151-69 (1982).
\end{itemize}
The main purpose of a union, according to most economists, is to limit the supply of labor so that the employer cannot use competition among workers to reduce wages. According to Posner, the common law was more economically sound because it enjoined picketing on the grounds that such activity interfered with the contractual relations of the picketed firm, its customers, and other employees. Under the NLRA, union organizing activities are encouraged by forbidding the employer to fire or retaliate against union organizers. Thus, the NLRA is a form of a reverse antitrust act, designed to encourage the cartelization of labor markets, whereas antitrust laws are intended to discourage cartelization of product markets. The situation is like a bilateral monopoly where both sides are trying to limit the supply of labor. However, there is no assurance that the supply of labor will reach a competitive level between the union and employer. The reason for this is the NLRA grants employers the right to replace striking workers, although the right is not unlimited. If the NLRA were neutral between the union and the employer, unions would be uncommon and less effective. Posner's economic explanation of labor regulation implies that the NLRA is not the most economically efficient way to regulate the labor market; rather, it favors the cartelization of labor.

3. Commerce: Public Utility & Common Carriers

In the area of commerce, Posner finds that regulation has distorted the efficient operation of the marketplace. Public regulation is imposed particularly in the case of a natural monopoly. A natural monopoly arises when fixed costs are very large in relation to demand for a service, and one firm

63. R. Posner, supra note 13, at 299.
64. Id.
65. Id. at 302.
66. Id.
67. Id. at 300.
68. Id.
69. The Act makes it easy to replace workers by:
   (1) withholding the protection of the Act from supervisory employees;
   (2) allowing the employer to hire permanent replacements for the striking workers;
   and
   (3) forbidding strikers to damage the employer's property.

The Act makes it hard for the employer to operate with replacement workers by:
   (1) forbidding him to pay a higher wage than that of the striking workers whom they replace;
   (2) allowing the strikers to picket the plant; and
   (3) forbidding him to sever the employment relationship with the striking workers.

Id. at 304-05.
70. Id. at 305.
71. This type of regulation has three primary elements: (1) profit control, (2) entry control and (3) control over price structure. Id. at 320.
can supply the entire output demanded for a lower cost than multiple firms.\textsuperscript{72} Posner argues that public regulation is deficient because it has deliberately imposed inefficient rate structures, has been applied to inherently competitive industries, and has been used to discourage competition in industries like the railroads where natural monopoly characteristics are not pervasive.\textsuperscript{73} Posner contends that regulation is rather like a product demanded by interest groups and supplied by the government.\textsuperscript{74} This leads to the conclusion that a rate structure, while inefficient overall, benefits interest group consumers greater than the costs it imposes on them in common with other consumers.\textsuperscript{75} Posner uses economic analysis to reveal that public regulation, unlike the common law, promotes inefficiency.\textsuperscript{76}

4. Securities Regulation

Posner also uses economic analysis to argue that regulation of the securities market leads to inefficiency. In the securities market, regulation is based on the premise that the market will not function competitively without adequate information describing the financial products.\textsuperscript{77} According to Posner, the markets are competitive and generate information without the need for government pressure.\textsuperscript{78} To support his contention, Posner cites a study that showed that purchasers of new issues of securities before registration was required, fared on the average no worse than purchasers today.\textsuperscript{79} Posner is equally distressed with the scope of regulation where the protections of the securities laws are extended to non-passive investors who are not in need of

\textsuperscript{72} \textit{Id.} at 317.

\textsuperscript{73} \textit{Id.} at 339. In light of this, Posner asks "whether the actual purpose of public utility regulation is to respond to the economist's concern about the inefficient consequences of unregulated natural monopolies," implying that unregulated natural monopolies are not necessarily bad. \textit{Id.}

\textsuperscript{74} \textit{Id.} ("Under this view there is no presumption that regulation is always designed to protect the general consumer interest in the efficient supply of regulated services.").

\textsuperscript{75} \textit{Id.} (Posner puts part of the blame for the inefficiency of rate structures on consumer interest groups.).

\textsuperscript{76} \textit{Id.} at 340 ("Here we use economic analysis to \textit{refute} the view that another branch of law, public utility regulation, pursues efficiency with the same consistency, and to propose instead, that it often pursues a conflicting objective.")(emphasis added).

\textsuperscript{77} \textit{Id.} at 420-21.

Securities regulation is rooted in part in a misconception about the great depression of the 1930s. It was natural to think that the 1929 stock market crash must have been the result of fraud [and] speculative fever . . . [b]ut a precipitous decline in stock prices is much more likely to result from the expectation of a decline in economic activity than to cause the decline.

\textit{Id.}

\textsuperscript{78} \textit{Id.} at 421. Government prodding of information about securities sold is not necessary in view of the presence of (1) "sophisticated middlemen . . . (2) sophisticated purchasers such as trust companies . . . and (3) the many financial analysts employed by brokerage firms." \textit{Id.}

\textsuperscript{79} \textit{Id.} at 421 n.3. See Stigler, \textit{Public Regulation of the Securities Markets}, 37 J. Bus. 117 (1964) (The effect of regulation on new issues does not help investors.).
For Posner there is little economic sense in securities regulation, or for that matter, regulation of any market that results in less efficiency.

D. Taxation and Redistribution

1. Internal Revenue—Taxation

Taxation can be used to allocate resources or to distribute wealth. Economic theory is an inherent factor in explaining taxation. According to Posner, the optimum tax would be one that has a large tax base, applies to highly inelastic activities, does not increase inequality, and is inexpensive to administer. An income tax, however, cannot satisfy the second and third requirements because identifying inelastic activities and the level of inequality would require a definition of income so broad that the administrative costs would be prohibitive. Moreover, there is a conflict between allocative efficiency and the distribution of wealth goals of tax policy. To maximize allocative efficiency, the tax rate must vary inversely with the elasticity of demand for the good or activity that is taxed. Taxing an activity creates an incentive for people to substitute another activity where the tax rate is less. If it is presumed that the first activity was the most productive use of resources, then redistribution through a new tax has induced a change to a less productive use. The opposite extreme from distribution of wealth policy, and the more economically efficient, would be to have all users of public services pay the cost of their use. Consequently, there is often a significant difference between distributive tax policy based on the need to fund public services, and allocative efficiency derived through economic analysis.

80. R. Posner, supra note 13, at 423. If the buyer of a business thinks the seller made misrepresentations during the sale, he can sue under Rule 10b-5 of the Securities Exchange Act of 1934, 15 U.S.C. §§ 78a-78kk (1982), as the victim of securities fraud. According to Posner, this makes little economic sense because no one buys a business without careful investigation. Id.
81. Id. at 461.
82. Id. A highly inelastic activity with respect to taxation is one in which a significant change in the tax rate will result in little or no substitution effects. In other words, the activity is not sensitive to changes in the tax rate.
83. Id. at 454. Posner uses the example of a flat federal head tax which would be allocatively efficient but "would be highly oppressive to poor people unless it were very low—in which event it would generate little revenue." Id.
84. Id. at 453.
85. Id. at 453-54 ("Hence the tax has reduced the efficiency with which resources are being employed.").
86. Id. at 453 ("But this would be treating public services just like private goods, whereas they are public services precisely because it is judged infeasible or inexpedient to sell them.").
2. Social Security and Public Welfare

Economic theory applies to transfer programs much the same as it does to taxation. Transfer programs are a portion of the public services that must be funded by the taxpayer, although Social Security is in part funded by its future beneficiaries.

Economic analysis can also be used to explain the relative merits of income inequality and poverty.87 Poverty imposes costs on the wealthy that warrant, without regard to ethical or political issues, incurring some costs to reduce it.88 Likewise, excessive poverty and little earning capacity in legitimate occupations coupled with the proximity of wealth, increases the expected benefits of crime.89 Conversely, Posner argues that the disincentive cost of welfare programs is significant.90 Moreover, Posner contends that even though the marginal utility of money income is higher for a poor person than for the wealthy, the costs of redistribution to the poor would offset their benefit and yield no net increase in the wealth of society.91 Judge Posner concludes that although there is an economic argument for government assistance to the poor, it should be coupled with private charity which Posner concedes is also problematic.92 Transfer programs involve many of the same economic inquiries as taxation along with the added issue of marginal utility.

E. Legal Process

1. Civil and Criminal Procedure

Posner views the economic analysis of the legal process much the same as a business manager would confront the operational efficiency of his firm. To Posner, the objective of a procedural system, in economic terms, is to minimize the cost of erroneous judicial decisions as well as the cost of

87. Id. at 439.
88. Id. ("For example, poverty in the midst of a generally wealthy society is likely to increase the incidence of crime.").
89. Id. ("The forgone income of a legitimate alternative occupation is low for someone who has little earning capacity in legitimate occupations . . . ").
90. Id. at 440 ("For example, the social security disability program has been found to create significant work disincentives . . . ").
91. Id. at 436. Technically speaking, Posner adds, "Involuntary redistribution is a coerced transfer not justified by high market-transaction costs; it is, in efficiency terms, a form of theft." Id. Posner later offers an exception to this harsh proposition. Id. at 438-39.
92. Id. at 441 ("The economic problems that make private charity inadequate could be overcome by a program of matching grants to charities.").
operating the procedural system. According to Posner, this objective was implicit in the Supreme Court's decision in *Mathews v. Eldridge* where the Court used a balancing test similar to the Hand formula. Due process would be denied when $B < PL$, where $B$ is the cost of the procedural safeguard, $P$ is the probability of error if the safeguard is denied, and $L$ is the magnitude of the property loss if the error occurs. The Court in *Mathews* held that in deciding the amount of process due someone in a suit against the government for deprivation of property, the courts should consider:

First, the private interest that will be affected by the official action; second, the risk of an erroneous deprivation of such interest through the procedures used, and the probable value, if any, of additional or substitute procedural safeguards; and finally, the Government's interest, including the function involved and the fiscal and administrative burden that the additional or substitute procedural requirement would entail.

In Posner's view, the *Mathews* case establishes an important economic precedent in the area of due process. Posner uses yet another formula to calculate whether a preliminary injunction should be granted. If the ratio of the plaintiff's to the defendant's chances of winning the potential lawsuit exceeds the ratio of the defendant's to the plaintiff's irreparable harm, then the injunction should be granted. Although these areas of procedure are efficient in part due to common law precedent, Posner contends that some of the rules are inefficient, and frequent litigation may only tend to solidify the inefficient rules if stare decisis is important to the court.

2. Legislation—Statutory Interpretation

The problems with "other than judgemade" law alluded to by Posner in the previous section carry over with more force in the area of legislation.

93. *Id.* at 517. For example, for the cost of error, if the expected cost of an accident is $100 and the cost to the potential injurer is $90, and there is a 15% chance that he will avoid liability due to error by the procedural system, then his cost will fall to $85 and the accident will not be prevented. For the cost of the procedural system, if the cost of reducing the error from 15% to 10% will cost the system an additional $20 per accident, then the error should be tolerated because the cost error will be less than cost to eliminate the error. *Id.*

94. *Id.* at 518 (citing *Mathews*, 424 U.S. 319) (However, the Court in *Mathews* did not mention or cite *Carroll Towing* nor did it discuss the Hand formula.). See also *Carroll Towing Co.*, 159 F.2d at 173. Cf. *Moisan*, 178 F.2d 148. See *supra* note 40.

95. R. Posner, *supra* note 13, at 518 (Posner equates the balancing test in *Mathews* with the Hand formula in *Carroll Towing*.).


97. R. Posner, *supra* note 13, at 522-23 n.21.4. The formula used is $P/1-P > H_p/H_d$, where $P$ is the probability that the plaintiff will prevail, $H_p$ is the irreparable harm that the plaintiff will suffer if no preliminary injunction is granted, and $H_d$ is the irreparable harm the defendant will suffer if the preliminary injunction is granted. *Id.*

98. *Id.* at 528 ("[I]f *stare decisis* competes with other judicial values, it becomes essential to specify those values." These values may be either "pro-efficiency" or "anti-efficiency" values.).
According to Posner, much of the nation's statutory law and administrative regulation is inefficient. In fact, Posner contends that while the correlation is not perfect, judgemade rules tend to be "efficiency-promoting" while those made by the legislatures are "efficiency-reducing." Posner explains that a judge must view the parties to litigation in the context of their activities, such as owning land, while the legislature can consider who is the "better" person.

Moreover, the legislature has more powerful and flexible means for redistributing wealth than does the judiciary. Posner posits that a major influence on legislation rests with interest groups, even though these groups cannot be relied on to deliver efficient or equitable laws. The role of interest groups in the judiciary is limited by the nature of the electoral process and also the concept of "standing." In order to interpret legislation arising out of a process dominated by interest groups, where an enactment is in a sense a "bargained sale," Posner suggests that the same methods used in interpreting ordinary contracts are appropriate. However, when legislative intent is involved, the plural nature of the enacting body creates difficulties. Hence, interest groups are a major influence in the inefficiency of legislation both in the enactment and later as the law is interpreted by the court.

F. Constitutional Law

1. Constitutional Law and Civil Rights

The cost-benefit approach of economic analysis is used by Posner to explain constitutional and civil rights law. According to Posner, the greater costs of changing the Constitution as opposed to changing statutes supports the principle that constitutional provisions should be interpreted more flexibly. Posner explains the exclusionary rule, an important rule restricting unlawful searches, in terms of the cost to society of doing without the seized evidence, 

99. Id. at 495 ("The list of inefficient rules discussed in this book could be extended enormously, to cover much of the nation's statute law and administrative regulations.").
100. Id.
101. Id. at 496.
102. Id. ("Ordinarily, the only way a common law court can redistribute wealth is by means of (in effect) an excise tax on the activity involved in the suit.").
103. Id. at 498 (Interest groups play an essential role in financing political campaigns.).
104. Id. at 499 (Once judges are appointed, they are insulated from interest group pressures. Standing limits the right to sue a person or organization.).
105. Id. at 500.
106. Id. ("The statements of individual legislators . . . cannot be assumed to express the views of the 'silent majority' that is necessary for enactment.").
107. Id. at 481 ("Flexible interpretation imparts generality to the constitutional language and hence . . . durability.").
ECONOMICS IN THE COURT

balanced against the social costs of the search.  Posner advocates that social costs incurred in searches are a reason for regulating them so that police do not conduct searches when the social costs exceed social benefits. He makes this determination by means of the Hand formula, where a search is reasonable if the cost or loss of privacy (B) is less than the probability (P) that without the search there would be no conviction, multiplied by the social loss (L) of not getting a conviction. The economic inquiry in this type of civil rights case is reduced to a balance between the cost to the individual in lost privacy and the cost to society of a lost conviction.

2. Federal Courts (Jurisdiction) and Judges

Economic analysis of federal court jurisdiction is based on a balance between state and federal interests. Diversity jurisdiction is justified as protecting the out-of-state party from the state court's interests in protecting its citizens from economic loss by shifting the balance in their favor. The Federal Tort Claims Act is explained in similar terms as a protection from a state's interest in spreading the loss from torts committed by federal employees across the United States rather than in their own state. Posner further elucidates that judicial economy is a major reason for pendant jurisdiction, removal of cases to federal court, and compulsory counterclaims.

II. CLASSIFICATION OF POSNER'S JUDICIAL OPINIONS

A. Economic Classifications

This Note employs a classification scheme that separates Posner's opinions into four classes according to the level of economic analysis they exhibit.

108. Id. at 639-42 (The exclusionary "... rule is a classic example of overdeterrence. The cost to society of doing without the evidence may greatly exceed the social costs of the search.").

109. Id. at 640 (However, "'[t]he fact that searches and seizures (including arrests) impose social costs is not, of course, an argument for banning them.'").

110. Id. (P) has two components: the probability that the search will provide probable cause and the probability that the evidence will be essential to a conviction. See supra notes 32-40 and accompanying text.

111. R. Posner, supra note 13, at 600-01. Diversity jurisdiction was traditionally justified by reference to a presumption of hostility to nonresidents. "There is an economic explanation for at least a part of the [diversity] jurisdiction that is unrelated to xenophobia." Id.

112. Id. at 601 ("The Federal Tort Claims Act [28 U.S.C. §§ 1291, 1346 (1982)] allows people injured by torts committed by federal employees to sue the United States—but only in federal court.").

113. See, e.g., By-Prod Corp. v. Armen-Berry Co., 668 F.2d 956, 962 (7th Cir. 1982) (The reason certain counterclaims are compulsory is judicial economy, although Posner maintains it would not work here because separate trials were unavoidable.); Wilson v. Intercollegiate (Big Ten) Conference Athletic Ass'n, 668 F.2d 962, 966 (7th Cir. 1982) (Federal court should be careful not to interrupt state court proceedings by allowing abrupt removal to federal court, which would reduce judicial economy.); cert. denied, 459 U.S. 831 (1983); Hixon v. Sherwin-Williams Co., 671 F.2d 1005, 1007 (7th Cir. 1982) (Judicial economy is the reason for pendant jurisdiction.).
Opinions that clearly use or do not use economic analysis are placed in the economic analysis (EA) or no economic analysis (NO) classes respectively. When the level of economic analysis in Posner’s judicial opinions is not clear, a simple “yes” or “no” classification is not possible. In fact, an extensive “gray” area exists where the use of economic analysis is not determinative but is significant. The two middle categories, economic explanation (EE) and economic precedent (EP), are intended to capture and account for this gray area.

The decision where to classify each case is the author’s subjective evaluation based on a careful reading of each case. The factors that enter into the decision include: the use of economic tests and formulas, the use of economic precedents, the extent to which economic analysis is used throughout the opinion, and the use of economic analysis in the holding and conclusion of the case. In most cases the decision is clear; however, in some complex cases with intermingled issues, the decision of how to classify becomes more problematic. In cases where the classification is not certain, the opinion appears in one of the two intermediate categories.

1. Economic Analysis (EA)

The economic analysis category lists cases in which economic analysis was explicitly used in an opinion to reach a decision. “Explicitly used” means that economic analysis was actually used in the form of tests or theories to reach the conclusion in the case. This category is exclusive of the categories where economic explanation or economic precedent was used. The actual use of economic analysis may be debatable in some cases and these marginal cases are deferred to the economic explanation category. The mere presence of “economic” language in an opinion, for example, in the application of a balancing test, does not constitute economic analysis for the purposes of this Note. Thus some cases placed in the economic explanation category may arguably contain a significant level of economic discussion. The cases in the category of economic analysis were decided primarily on the basis of one of Posner’s economic theories such as cost-benefit analysis.

2. Economic Explanation (EE)

This category contains cases in which economic analysis was used in an opinion to explain the outcome of a decision that was based on legal precedent, a statute or a rule. This category includes cases that use economic analysis in dicta and cases that simply discuss the relationship between the subject matter and economic theory. Cases in this category were decided by following the common judicial processes of stare decisis and statutory interpretation. However, the arguments supporting the decisions were bolstered and supplemented with both positive and normative economic explanations that were
sometimes more extensive than dicta, but insufficient to support the decision on their own. The most common example is the use of a judicial efficiency argument to support a decision on pendant jurisdiction.\textsuperscript{114}

3. Economic Precedent (EP)

Cases in this category were decided by using economic formulas and analyses from prior cases to justify the use of economic analysis in the present case. In short, the decisions in these cases were reached through adherence to stare decisis, albeit economic in nature. This category is different from the economic explanation category because the use of economic analysis here derives from its application in an earlier case and it is used to reach a decision just like the economic analysis classification. The only difference between this category and the economic analysis category is the source of the economic theory. In the first category Posner uses original economic analysis; here, he uses economic analysis from prior cases.

4. No Economic Analysis (NO)

The final category contains those cases in which the opinion contains no economic analysis in any form. This category is also exclusive of the other categories.

B. Subject Matter Categories

1. Category Choice

The choice of subject matter categories for this Note is based on the substantive areas of law covered by Posner’s opinions. Although Posner discusses many areas of law in his books and articles, this Note only analyzes those areas that he has encountered in the courtroom. The substantive law is divided into fourteen categories which are divided among five general law topics. In order to condense the data several of the categories include related subtopics.

\textsuperscript{114} See supra note 113 and accompanying text.
Categories

A. Common Law
   1. Property law including intellectual property
   2. Contract law
   3. Tort law
   4. Criminal law including habeas corpus

B. Regulation of Markets
   1. Antitrust law and monopoly
   2. Labor law
   3. Commerce law including telecommunications, common carriers and public utilities
   4. Securities regulation

C. Taxation and Entitlements
   1. Internal Revenue Service
   2. Entitlements including social security, public welfare and other transfer programs

D. Legal Process
   1. Procedure including both civil and criminal
   2. Legislation including administrative law, statutory interpretation, and bankruptcy

E. Constitutional Law
   1. Constitutional law and civil rights
   2. Federal courts including jurisdiction and judges

The determination of the subject matter category into which each case should be placed was based on the merits of the case. In cases where several significant issues were addressed, every effort was made to determine the major issue. In a small number of cases this required a subjective decision between competing issues. For example, in a case where jurisdiction was a concurrent issue, if the jurisdiction question was clearly dominant, the opinion would be included in the federal court category. The tables include majority opinions, concurring opinions, and dissenting opinions written by Posner.

2. Data

The data are compiled in yearly tables for 1981-1982, 1983 and 1984, and one composite table for all 300 cases. The total number of cases is listed for each of the five general law topics and each of the four economic classifications. The percentage of cases in each general topic and economic classification, to the aggregate total of cases is also provided. The 1981-1984 composite table also provides totals for each of the fourteen subject matter categories and a percentage of total cases for each economic classification by general law topic.
Because of rounding off, the percentages given are accurate to plus or minus one percentage point.

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<tr>
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<td>11</td>
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</tr>
<tr>
<td></td>
<td>3</td>
<td>6</td>
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<td></td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
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<td>6</td>
<td>1</td>
<td>20</td>
<td>33/37%</td>
</tr>
</tbody>
</table>

| Sub-total             | 11 | 18 | 2  | 57 | 88/ |
| Percentage            | 12%| 21%| 2% | 65%| 100%|

In 1981 and 1982, eleven of the eighty-eight opinions authored by Posner used economic analysis, and in eighteen opinions, Posner used economic

115. Omega Satellite Products Co. v. City of Indianapolis, 694 F.2d 119 (7th Cir. 1982); Wild v. United States Dept't of Housing and Urban Dev., 692 F.2d 1129 (7th Cir. 1982); Marrese v. American Academy of Orthopaedic Surgeons, 692 F.2d 1083 (7th Cir. 1982) (Marrese I), modified, 706 F.2d 1488 (7th Cir. 1983) (Marrese II), modified on rehearing en banc, 726 F.2d 1150 (7th Cir. 1984) (plurality opinion by Posner, J.) (Marrese III), rev'd, 470 U.S. 373 (1985) (Only the first case is analyzed in this Note.); Smith Corp. v. United States, 691 F.2d 1220 (7th Cir. 1982); McKeever v. Israel, 689 F.2d 1315 (7th Cir. 1982); Menora v. Illinois High School Ass'n, 683 F.2d 1030 (7th Cir. 1982), cert. denied, 459 U.S. 1156 (1983); United States Fidelity & Guaranty Co. v. Jadranka Slobodna Plovidba, 683 F.2d 1022 (7th Cir. 1982); Dragan v. Miller, 679 F.2d 712 (7th Cir. 1982), cert. denied, 459 U.S. 1017 (1983); United States v. Board of School Comm'rs, 677 F.2d 1185 (7th Cir. 1982) (Posner, J., dissenting), cert. denied, 459 U.S. 1086 (1983); Bart v. Telford, 677 F.2d 622 (7th Cir. 1982); Powers v. United States Postal Service, 671 F.2d 1041 (7th Cir. 1982).
theory to explain or support a decision made with traditional methodology. At least two of the eighteen opinions are at odds with each other on the viability of the Hand formula.\textsuperscript{116} Two of the eighty-eight opinions used economic analysis derived from precedent,\textsuperscript{117} and fifty-seven opinions, or sixty-five percent, made no reference to economic analysis.

\begin{tabular}{|l|c|c|c|c|c|}
\hline
\textbf{YEAR 1983} & \textbf{EA} & \textbf{EE} & \textbf{EP} & \textbf{NO} & \textbf{Total/\%} \\
\hline
\textbf{Common Law} & & & & & \\
1. Property & 0 & 0 & 0 & 2 & \\
2. Contract & 1 & 0 & 0 & 4 & \\
3. Tort & 1 & 3 & 0 & 3 & \\
4. Criminal & 0 & 2 & 0 & 8 & \\
Sub-total & 2 & 5 & 0 & 17 & 24/27\% \\
\hline
\textbf{Regulation of Markets} & & & & & \\
1. Antitrust & 0 & 0 & 0 & 0 & \\
2. Labor & 0 & 3 & 0 & 6 & \\
3. Commerce & 2 & 0 & 1 & 1 & \\
4. Securities & 0 & 0 & 0 & 1 & \\
Sub-total & 2 & 3 & 1 & 8 & 14/16\% \\
\hline
\textbf{Taxation—Entitlements} & & & & & \\
1. IRS & 0 & 3 & 0 & 1 & \\
2. Entitlements & 0 & 0 & 0 & 2 & \\
Sub-total & 0 & 3 & 0 & 3 & 6/7\% \\
\hline
\textbf{Legal Process} & & & & & \\
1. Procedure & 0 & 2 & 0 & 7 & \\
2. Legislation & 0 & 0 & 0 & 5 & \\
Sub-total & 0 & 2 & 0 & 12 & 14/16\% \\
\hline
\textbf{Constitutional Law} & & & & & \\
1. Constitutional & 2 & 2 & 2 & 11 & \\
& Civil Rights & 0 & 1 & 0 & 13 & \\
2. Federal Courts & 2 & 3 & 2 & 24 & 31/34\% \\
Sub-total & & & & & \\
Total \ldots & 6 & 16 & 3 & 64 & 89/
Percentage & 7\% & 18\% & 3\% & 72\% & 100\% \\
\hline
\end{tabular}

In 1983, only six of the eighty-nine opinions authored by Posner used

\textsuperscript{116} \textit{Compare} Sutter v. Groen, 687 F.2d 197, 202 (7th Cir. 1982) (Posner uses empirical assumptions in concluding that simplifying legal rules by expanding liability will rarely result in a net cost savings.) \textit{with} O’Shea v. River Way Towing Co., 677 F.2d 1194, 1201 (7th Cir. 1982) (Posner, in his majority opinion, suggests that the exactness of economic analysis in the litigation setting is “somewhat delusive.”).

\textsuperscript{117} Evra Corp. v. Swiss Bank Corp., 673 F.2d 951, 958 (7th Cir. 1982) (citing United States v. Carroll Towing Co., 159 F.2d 169 (2d Cir. 1947)), \textit{cert. denied}, 459 U.S. 1017 (1983); Sutton v. City of Milwaukee, 672 F.2d 644, 645 (7th Cir. 1982) (citing Mathews v. Eldridge, 424 U.S. 319, 335 (1976)).
economic analysis in deciding the case.\textsuperscript{118} Posner used economic explanations in sixteen cases, or eighteen percent of the time, a slight decrease from 1981-82. Posner used economic analysis from precedent in three opinions in 1983, and in two of these opinions he referred to the due process balancing test in \textit{Mathews v. Eldridge}.\textsuperscript{119} In 1983, the percentage of cases in which no economic analysis was used increased slightly, from sixty-five to seventy-two percent.

\textbf{YEAR 1984}

<table>
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<tr>
<th>Common Law</th>
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<th>EE</th>
<th>EP</th>
<th>NO</th>
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</tr>
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<tr>
<td>1. Property</td>
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<td>3. Tort</td>
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</tr>
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<td>5</td>
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<td>3. Commerce</td>
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<tr>
<td>4. Securities</td>
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<tbody>
<tr>
<td>1. IRS</td>
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<th>EA</th>
<th>EE</th>
<th>EP</th>
<th>NO</th>
<th>Total/%</th>
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<tr>
<td>1. Constitutional</td>
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<td>2</td>
<td>2</td>
<td>9</td>
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<td>&amp; Civil Rights</td>
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<td>2. Federal Courts</td>
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<td>15</td>
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<tr>
<td>Sub-total</td>
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<td>24</td>
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<td>15</td>
<td>4</td>
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<td>17%</td>
<td>5%</td>
<td>70%</td>
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\textsuperscript{119} Vail v. Board of Educ., 706 F.2d 1435, 1449, 1454 (7th Cir. 1983) (Posner, J., dissenting) (citing the due process balancing test in \textit{Mathews}, 424 U.S. at 335), \textit{aff'd}, 466 U.S. 377 (1984); People v. I.C.C., 709 F.2d 1186 (7th Cir. 1983); Brown v. Brienen, 722 F.2d 360, 365 (7th Cir. 1983) (Posner again refers to the test in \textit{Mathews} to determine that there was no denial of due process.).
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<td>6</td>
<td>2</td>
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<td>2. Contract</td>
<td>1/ 9</td>
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<td>1/ 9</td>
<td>8/73</td>
<td>11</td>
<td>4</td>
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<tr>
<td>3. Tort</td>
<td>2/14</td>
<td>5/36</td>
<td>1/ 7</td>
<td>6/43</td>
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<td>4. Criminal</td>
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<td>35/81</td>
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<tr>
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<td>14/19%</td>
<td>2/ 3%</td>
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<td>3. Commerce</td>
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<th>Taxation—Entitlements</th>
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<tr>
<td>1. IRS</td>
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<td>2. Entitlements</td>
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<th>Constitutional Law</th>
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<tr>
<td>2. Federal Courts</td>
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<td>Sub-Total</td>
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<td>Total Cases</td>
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<td>Percent all cases</td>
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In 1984 Posner used economic analysis in seven of the eighty-eight opinions he authored. In Posner used economic explanation in fifteen cases, or seventeen percent of the time, which nearly equaled the percentage in 1983. Posner used economic analysis from precedent in four opinions in 1984 citing *Mathews* in two of the opinions. The percentage of opinions in which no economic analysis was used was seventy percent. In relative terms, economic precedent and economic analysis are the only categories that showed any appreciable change over the three year period; economic precedent has slowly risen and economic analysis has gradually declined.

### III. Analysis and Comparison

#### A. Where and How Frequently Economic Analysis Occurs

The use of economic analysis occurred, on average, in approximately eight percent of Posner's first 300 opinions. The use of economic explanation appeared in an average of 18 percent of his opinions. The use of economic precedent was very rare, accounting for an average of three percent of Posner's opinions. Finally, the majority of Posner's opinions used no economic analysis. The no economic analysis category represents on average approximately seventy-one percent of Posner's opinions. Therefore, at the outset of this section, it can be concluded that Posner has used economic analysis in less than ten percent of his opinions or at most between ten and twenty-six percent if the economic explanation category is considered.

1. **Common Law Cases**

The occurrence of economic analysis in Judge Posner's common law opinions, appears to fall somewhat short of his theoretical expectations.

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120. Rowan v. Owens, 752 F.2d 1186 (7th Cir. 1984); Brunswick Corp. v. Riegel Textile Corp., 752 F.2d 261 (7th Cir. 1984); Roland Machinery Co. v. Dresser Industries, 749 F.2d 380 (7th Cir. 1984); Jack Walters & Sons Corp. v. Morton Bldg., Inc., 737 F.2d 698 (7th Cir. 1984); Alliance to End Repression v. City of Chicago, 733 F.2d 1187, 1192 (7th Cir. 1984) (Posner, J., dissenting in part and concurring in part); Indianapolis Airport Authority v. American Airlines, 733 F.2d 1262 (7th Cir. 1984); Wheaton Van Lines v. I.C.C., 731 F.2d 1264, 1269 (7th Cir. 1984) (Posner, J., dissenting).

121. United States v. Torres, 751 F.2d 875, 883 (7th Cir. 1984) (citing Camara v. Municipal Court, 387 U.S. 523, 536-37 (1967) for the use of a balancing test in determining when a search is reasonable under the fourth amendment); Parrett v. City of Connersville, 737 F.2d 690, 696 (7th Cir. 1984) (citing *Mathews*, 424 U.S. at 335); Flaminio v. Honda Motor Co., 733 F.2d 463, 468 (7th Cir. 1984) (citing Fed. R. Evid. 407 on subsequent remedial measures as an incentive to correct); United States v. Lowery, 733 F.2d 441, 447 (7th Cir. 1984) (citing *Mathews*, 424 U.S. at 335).

122. *See supra* notes 22-45 and accompanying text.
Comparatively speaking, the use of economic theory in common law cases was among the lowest of the five areas analyzed. More specifically, in property law cases there was virtually no use of economic theory, although economic explanation was used in one case. In criminal law cases the lack of economic analysis in Posner’s opinions was even more dramatic. Economic analysis was used in deciding contract law cases at about the average rate of eight percent although very few opinions were written on the subject. In the tort law area, a seemingly bright spot for Posner’s theory, economic analysis was used only fifteen percent of the time, although thirty-six percent of the opinions used economic explanations.

2. Regulation of Markets

The use of economic analysis in the regulatory area of law was sixteen percent or about double the overall average. However, the variation among the subcategories was significant. For example, in antitrust law, economic analysis was used in nearly fifty percent of the opinions. This is not surprising considering the close relationship between economics and antitrust law. Economic analysis was also used in the commerce regulation area at the rate of twenty-seven percent, which was triple the overall average. However, in labor law and securities regulation, two areas where Posner uses economic analysis to refute the current law, his use of economic theory was nonexistent. The reliance in labor and securities law on statutes and regulations undoubtedly had influence on the application of economic analysis in these areas.

3. Taxation and Entitlements

Economic analysis was rarely used in tax law and public welfare cases. The most likely explanation for this is that this group is the least litigated

123. Property law in the traditional sense is based on state common law. Thus, it is rare to find property law cases in federal court. The six property law cases analyzed in this Note were either patent or trademark cases controlled by federal law. See Scott, Answers Are More Needed Than Perspectives, 33 J. LEGAL EDUC. 237 (1983) (Property-rights theory is a new development outside the main line of economic theory, and as yet has little to offer empirically.).


125. Hansmann, The Current State of Law and Economics Scholarship, 33 J. LEGAL EDUC. 217, 231 (1983). Law and economics has been absent in criminal law where the sources of law are primarily legislative. In the federal courts, the federal criminal law is primarily statutory, while in diversity actions where state law is applied, there may be a combination of common law and statutory law. Id.

126. Breyer, Economics for Lawyers and Judges, 33 J. LEGAL EDUC. 294-96 (1983). Economics directly influences the content of the rules of antitrust law. “[T]he specific role economics plays may at times be controversial, but the proposition that economics has a central role is not.” Id. at 294.

127. See supra notes 62-70, 77-80 and accompanying text.
and possibly the most heavily regulated. The one case where economic analysis occurred involved statutory interpretation of the tax code where the intent of Congress was not clear.\textsuperscript{128}

4. Legal Process

The use of economic analysis in the procedure and statutory areas of law was expectedly low. The Federal Rules of Civil Procedure as well as the Federal Rules of Criminal Procedure leave very little room for alternative interpretations. Likewise, because legislation is generally enacted for specific objectives that are not always based on rational behavior, it is rarely conducive to economic theory.

5. Constitutional Law and Federalism

The constitutional law area, including civil rights and federal courts, was an average area for economic analysis by Posner. Posner used economic analysis in about twelve percent of the cases in this area. It was the most litigated area although many if not all of the cases in the federal courts category were decided on jurisdictional grounds. The federal courts area also had a large number of opinions focusing on the issue of federalism and judicial efficiency. The constitutional and civil rights cases were often conducive to economic analysis because there was no clear precedent.\textsuperscript{129} Moreover, in civil rights cases involving due process claims against the government, Posner relied on economic precedent, namely Mathews.\textsuperscript{130} Thus, despite the seemingly tenuous relationship between constitutional law and economics,\textsuperscript{131} Posner has managed to apply economic analysis in a significant number of constitutional law cases.

IV. LIMITATIONS AND CONSTRAINTS ON THE USE OF ECONOMIC ANALYSIS IN DECISIONMAKING

The use of economic analysis by judges in decisionmaking is limited. Posner concedes courts can do little to affect the distribution of wealth in society\textsuperscript{132}

\textsuperscript{128} Smith Corp. v. United States, 691 F.2d 1220 (7th Cir. 1982) (statutory interpretation of the investment tax credit recapture provision).

\textsuperscript{129} See, e.g., Menora v. Illinois High School Ass'n, 683 F.2d 1030 (7th Cir. 1982), cert. denied, 459 U.S. 1156 (1983); Bart v. Telford, 677 F.2d 622 (7th Cir. 1982).

\textsuperscript{130} 424 U.S. 319. Although the Court in Mathews dealt with due process in an administrative adjudication, Posner has referred to Mathews as economic precedent in other areas of law as well. See, e.g., People v. I.C.C., 709 F.2d 1186, 1193 (7th Cir. 1983); Sutton v. City of Milwaukee, 672 F.2d 644 (7th Cir. 1982).

\textsuperscript{131} See Cohen, supra note 5, at 1162 ("[C]onstitutional rights have little to do with economics because they primarily concern equity rather than efficiency.").

\textsuperscript{132} Posner, Wealth Maximization, supra note 8, at 132-34 ("[S]o it may be sensible for them to concentrate on what they can do, which is to establish rules that maximize the size of the economic pie, and let the problem of slicing it up be handled by the legislature with its much greater taxing and spending powers.").
and that costs and benefits often cannot be quantified. Even for Posner who has the ability and desire to apply novel theories like economic analysis, its use in the courts could be problematic. The following sections will explore more specific limitations on the use of economic analysis in the courts.

A. Precedent

In many of the opinions authored by Judge Posner, the outcome of the case was controlled at least in part by precedent. In a majority of such cases the precedent foreclosed the use of economic analysis as a decisionmaking tool. The view that economic analysis can offer rational rules, applicable in various subject areas, to be used in place of ad hoc or conflicting rules has some support in academia. Posner has questioned the continued use of formalistic methods of opinion writing including reliance on precedent that ignores the reality of a decision. However, Posner met with some disagreement on the court when he questioned the wisdom of applying certain Supreme Court precedents. Moreover, at least one judge has accused Posner of disregarding certain "long-settled" principles of law. Posner's response to similar charges is that his perception of his role as a judge includes deciding cases in a "principled fashion." While Posner has challenged the role of

133. Id. at 134.
134. Id. at 131. Posner states:
   He will want to be thought a good judge, and he will not if he uses his position to peddle his academic ideas. He will not have the respect of his colleagues or of the bar, he will have trouble marshaling his court behind his positions, he will find that a judicial opinion is an inefficient vehicle for developing complex ideas, he will find that his opinions are discounted because of the ulterior motive behind them, and he will not have the time to write articles in opinion format. The whole atmosphere will be against him.

Id.

135. See Cohen, supra note 5, at 1164.
137. See Vail v. Board of Educ., 706 F.2d 1435, 1441 (7th Cir. 1983) (Eschbach, J., concurring), aff'd, 446 U.S. 377 (1984) (In response to Posner's dissent, Eschbach states: "My brother Posner calls this approach to deciding cases 'putting the blame on the [Supreme] Court.' . . . I call it adherence to stare decisis and to a superior authority." (citation omitted)).
139. Vail, 706 F.2d at 1452 (Judge Posner's response to Judge Eschbach was, "I plead guilty, though, to Judge Eschbach's charge that I am 'superimposing a unifying doctrinal thread onto the cases which would explain their outcomes in a principled fashion.' I had understood this to be my job.").
precedent as well as the superior authority of the Supreme Court,\textsuperscript{140} he has followed the applicable precedent in the majority of his opinions.

1. Economic Precedent

Posner makes use of major decisions of the past that not only used economic analysis but have become the very foundation of his theories.\textsuperscript{141} In a tort case with a similar factual situation to that of the \textit{United States v. Carroll Towing Company}, Posner explicitly relies on the Hand formula to reach his decision on negligence.\textsuperscript{142} Although Posner suggests in his opinion that the district courts use the Hand formula in maritime cases, he adds that they are not forced to.\textsuperscript{143} A balancing test similar to the Hand formula also appears in a different form in \textit{Mathews v. Eldridge},\textsuperscript{144} where the Supreme Court used a balancing test based on three factors to decide the level of due process to which an individual is entitled.\textsuperscript{145} Although Posner concedes that it is rarely possible to quantify the terms used in the Hand formula,\textsuperscript{146} he uses \textit{Mathews} as support for economic analysis in several constitutional law cases involving due process.\textsuperscript{147} Therefore, in some torts cases, especially maritime, and in most all cases where there is an alleged deprivation of due process by the government, Posner has had the luxury of stare decisis to support his use of economic analysis. With the support of precedent, Posner is not compelled to justify his use of economic analysis in the opinion.

2. Judicial Restraint

The use of judicial restraint in Posner's opinions varies. Although Posner contends that a judge's own policy preferences should only be involved in a decision when other "technical" methods fail, he concedes that it does not always work that way in practice.\textsuperscript{148} Posner has made it clear in at least one opinion that even an economic inquiry was misplaced where he believed the

\begin{itemize}
  \item \textsuperscript{140} See \textit{supra} notes 136-139.
  \item \textsuperscript{141} See \textit{supra} notes 32-40 and accompanying text.
  \item \textsuperscript{142} United States Fidelity & Guar. Co. v. Jadranska Slobodna Plovidba, 683 F.2d 1022 (7th Cir. 1982) (citing United States v. Carroll Towing Co., 159 F.2d 169, 173 (2d Cir. 1947)) (shipowner found not negligent in the death of a longshoreman who fell through an open hatch on a ship).
  \item \textsuperscript{143} Id. at 1026.
  \item \textsuperscript{144} 424 U.S. 319, 335 (1976).
  \item \textsuperscript{145} See \textit{supra} text accompanying note 96.
  \item \textsuperscript{146} See \textit{supra} note 40.
  \item \textsuperscript{147} See \textit{supra} notes 116, 119 & 121.
  \item \textsuperscript{148} See Posner, \textit{The Meaning of Judicial Self-Restraint}, 59 Ind. L.J. 1, 24 (1983). See also R. Posner, \textit{The Federal Courts} 207-08 (1985). Posner suggests that the term "judicial self-restraint" could be defined in no less than five ways, but he seems to prefer what he calls "structural restraint," which means that the judge should try to "limit his court's power over other government institutions." \textit{Id.}.
\end{itemize}
law was clear. However, other judges on the court have likened his use of economic analysis, in lieu of precedent, to a form of judicial activism in itself. In the absence of clear precedent or rules, Posner believes economic analysis to be an acceptable method of decision.

B. Subject Matter Limitations

The subject matter limitations on the use of economic analysis are significant in a comparative sense, given the fact that economic analysis was only used in about eight percent of Posner's opinions. This suggests that there are certain areas of the law where he did not find economic analysis useful. Although Posner's theory suggests that economic analysis applies to most every area of the law, other authors contend that it is not as useful in areas of law governed largely by legislation and regulation. These general observations on the area of legislation and regulation are supported by the data. However, in the common law area where the law is predominantly judge-made, the use of economic analysis is comparatively lower than expected. The use of economic analysis in constitutional and civil rights cases, often considered to be unlikely combinations, was unexpectedly higher. The subject matter limitation on the use of economic analysis is thus a relevant but not determinative factor as to the actual frequency of economic analysis.

C. The Use of Economic Explanation to Avoid Limitations

The category labeled economic explanation, which represented approximately eighteen percent of all the opinions, provides significant insights into

149. United States v. Board of School Comm'rs, 677 F.2d 1185, 1192 (7th Cir. 1982) ("The end of an equity suit is an injunction, or if the injunction is not obeyed a contempt proceeding; it is not an inquiry into who will bear the costs of the injunction."); cert. denied, 459 U.S. 1086 (1983).

150. See supra notes 137-39. See also Smith Corp. v. United States, 691 F.2d 1220, 1222 (7th Cir. 1982) (Dumbauld, J., dissenting) ("[Posner] carries over into the analysis of this case the philosophy which permeates [economic analysis of law]: that economic activity is a rational decision-making process ... "); cf. Mosey Mfg. Co. v. N.L.R.B., 701 F.2d 610, 616 (7th Cir. 1983) (Cudahy, J., dissenting) (Even though no economic analysis was used by Posner, the dissent charged, "[T]he majority has engaged in an extraordinary exercise of judicial activism ... ").

151. R. Postr, supra note 13, at 20-21. See also supra notes 2 & 3 and accompanying text.

152. Hansmann, supra note 125, at 235. There is a strong positive correlation between the extent of judge-made law and the level of law and economics scholarship that does not hold true for legislation. Id. See also Posner, Wealth Maximization, supra note 8, at 134.

I have said that the judicial process maximizes wealth within a framework given by the distributive arrangements of the society. But the framework is actually more confining, especially when one is speaking about the work of a judge on an intermediate appellate court, administering a body of law that is largely statutory rather than common law.

Id.

153. See Cohen, supra note 5, at 1162.
the determination of where the use of economic analysis is limited.\textsuperscript{154} There are three general types of economic explanation used in Posner's judicial opinions. The first is where economic illustrations that use hypothetical fact situations are used to explain a conclusion reached on other grounds. The second is where economic explanations are used to explain the economic underpinnings of existing statutes and procedural rules. The final type is where economic assumptions are used to reinforce an economic argument in support of a decision that was reached on other grounds.

1. Economic Illustrations

The use of economic illustration allows for the injection of economic analysis into an opinion where it would not otherwise apply. Although illustrations are commonly used in judicial opinions to clarify an argument or conclusion, it is unusual for the illustration to allude to a completely different rationale for reaching a decision. In United States v. Anton,\textsuperscript{155} Posner contends in his dissenting opinion that the standard of not allowing a reasonable mistake defense in an immigration deportation case is appropriate. Posner analogizes this standard to one applying in rape cases where, even though a no-reasonable-mistake defense may deter sex with young-looking but legal age women as well as under-age women, this overdeterrence is a small price to pay.\textsuperscript{156} The appeal is to the relationship between circumstances not factually similar but rather similar in economic terms.

2. Economic Explanations for Existing Statutes and Procedural Rules

The use of economic explanations for existing statutes and rules also provides a means for inserting economic analysis into a judicial opinion. The most common application of economic explanation by Posner is the judicial efficiency rationale for pendant jurisdiction and the Younger doctrine.\textsuperscript{157} This argument is used in no fewer than six opinions to explain the judicial efficiency

\textsuperscript{154} Opinions that fall within the economic explanation classification often have the potential for economic analysis in terms of subject matter but are limited by precedent, statutes or rules, or require too much empirical speculation to support the decision.

\textsuperscript{155} 683 F.2d 1011, 1020 (7th Cir. 1982) (Posner, J., dissenting) (alien's alleged reasonable belief that he had consent of Attorney General to reenter the United States held to constitute viable mistake-of-law defense.).

\textsuperscript{156} \textit{Id.} at 1020 ("Socially permitted activity is thereby deterred; but since there is no strongly felt social interest in encouraging the activity, overdeterrence is seen as a small price to pay for having a statute that is easier to enforce . . . .").

\textsuperscript{157} Younger v. Harris, 401 U.S. 37 (1971) (limiting the power of federal courts to enjoin proceedings in state court).
objectives of legal procedure in the federal courts.\textsuperscript{158} Although Posner’s explanations of the existing law of pendant jurisdiction and the \textit{Younger} doctrine take nothing from the opinions, it is not necessary to explain the existing rule in economic terms to reach a decision where Congress and the Supreme Court have already defined the law.

3. Economic Assumptions that Support a Decision Reached on Other Grounds

In a number of cases where the decision is based on common law or regulations, Posner offers economic explanations that require quantitative assumptions to support the decision. These explanations could be characterized as dicta because they are not necessary to reach a decision in the case. For example, in \textit{Sutter v. Groen},\textsuperscript{159} a securities regulation case, Posner speculates as to the costs of future judicial determinations when he considers whether to protect “entrepreneurs” and “investors” without discussing the relative demand for additional litigation. Moreover, in \textit{United States Marine Corp. v. SPS Technologies},\textsuperscript{160} a patent infringement case, Posner again speculates as to the relative demand for litigation by a patent infringer at two different points in time, either at the time of the fraud by the patent holder (the less costly choice) or at a later date. Thus, in selected cases where the outcome is secured on other grounds, there is an opening for an economic explanation of the result which may use assumptions that are not factually supported.

\textit{D. Institutional Constraints Faced by Judges}

1. Conflict and Dissent

Conflict among the judges on an appeals court as to the use of alternative decisionmaking methods such as economic analysis may affect the frequency of its use. Even with the benefit of dissenting opinions, it is very difficult to

\textsuperscript{158} See Jackson v. Consolidated Rail Corp., 717 F.2d 1045 (7th Cir. 1983), \textit{cert. denied} 465 U.S. 1007 (1984); Evans Transp. Co. v. Scullin Steel Co., 693 F.2d 715 (7th Cir. 1982); United States \textit{ex. rel. Stevens v. Circuit Court}, 675 F.2d 946 (7th Cir. 1982); Hixon v. Sherwin-Williams Co., 671 F.2d 1005 (7th Cir. 1982); Wilson v. Intercollegiate (Big Ten) Conference Athletic Ass’n, 668 F.2d 962 (7th Cir. 1982), \textit{cert. denied}, 459 U.S. 831 (1983); By-Prod Corp. v. Armen-Berry Co., 668 F.2d 956 (7th Cir. 1982).

\textsuperscript{159} 687 F.2d 197, 202 (7th Cir. 1982) (Judge Posner states “that the costs of administering legal rules are a proper concern in designing those rules. But rarely will a net saving in those costs be produced by expanding liability . . . .”).

\textsuperscript{160} 694 F.2d 505, 508 (7th Cir. 1982), \textit{cert. denied}, 462 U.S. 1107 (1983); (“[R]ather than deterring patent fraud, [such an exception] would reduce the incentive of an infringer to prove fraud when first sued . . . .”).
determine what actually takes place in the judicial chambers. Nevertheless, appellate judges frequently disagree over which precedents should apply and how far legal policy can be pushed. And while it is not clear to what extent the other judges agree with Posner's use of economic analysis, several non-majority opinions have been openly critical of Posner's use of economic analysis in his majority opinions. Moreover, some of the opinions equate Posner's economic analysis with judicial activism.

2. Economic Knowledge and Complexity

The need for a solid understanding of economics before it can be used in a judicial opinion is a limitation on its acceptance by other judges. There is a presumption that every case that comes before a court can be decided without the use of economic analysis. Since economic analysis as advocated by Posner is a relatively new method for judicial decisionmaking, it follows that some judges will either not understand how it can be applied, or will simply choose not to accept it. Moreover, economic analysis, to be used correctly, requires the integration of empirical data and at least a minimal level of economic theory. Often there is no source for the empirical data needed to decide a case with economic analysis.

Posner is able to apply economic theory in some of his opinions because of his vast knowledge of economics. However, a majority of highly proficient judges without the same knowledge would find it difficult if not impossible. Even Posner concedes there is a "disgraceful" and "prevalent" math block that afflicts lawyers and judges. In Indianapolis Airport Authority v.  

161. S. Goldman & C. Lamb, Judicial Conflict and Consensus 4 (1986) ("[R]arely do dissenting or concurring opinions reveal what actually has taken place in judicial chambers . . . .").
162. Id. at 3. See also Lamb, Exploring the Conservatism of Federal Appeals Court Judges, 51 Ind. L.J. 257 (1976).
163. See supra notes 138-39 & 150.
165. See Cohen, supra note 5, at 1161 ("[T]he difficulty in making the empirical and practical determinations necessary to apply economic theory makes this methodology a costly one.").
166. Id. ("[P]roper execution of [economic] analysis requires the use of empirical data that is largely unavailable.").
167. See Posner, The Decline of Law, supra note 10, at 778. While few judges can equal Posner's enthusiasm for economic analysis in the courtroom, Posner contends, "Just as people were maximizing utility before the terms were invented by economists, judges may have been maximizing efficiency before the language of economics gained currency in judicial opinions."
American Airlines, Inc.,\textsuperscript{168} Posner's interpretation of the Federal Anti-Head Tax using locational monopoly theory led the concurring judge to conclude that the circular use of monopoly theory only over-complicated the issues and was not necessary to decide the case. The limitation of economic complexity and lack of economic knowledge on the part of other judges assumes that the other judges would agree to the use of economic analysis even if they chose to master it.

CONCLUSION

Posner advocates the use of economic analysis in judicial decisionmaking. In theory, Posner argues that economic theory can be used as a principle for the creation of law by judges. In his books and articles, Posner has explained nearly every area of law in economic terms; however, he offers little advice on how it may actually be used in judicial decisionmaking. While efficiency and balancing of interests are considerations that judges have recognized for some time, Posner's brand of economic jurisprudence requires a substantial commitment to economic theory well beyond that used in the past. Economic analysis is based on certain assumptions that people make decisions in a quantifiable way. It is this technical and mechanical extension of economic theory into the law, to the exclusion of other traditional methods, that has created the law and economics debate.

Economic analysis is useful in certain types of cases where the subject matter and precedent are inherently economic. In the areas of common law and constitutional law where the law is predominantly judge-made, and no controlling precedent exists, economic analysis may offer an alternative method of decisionmaking for the judge inclined to use it. However, in the areas of law governed by statutes and regulations, or where there is controlling precedent, the use of economic analysis becomes tenuous. The use of economic analysis is further limited by a possible lack of acceptance within the courts, and by its inherent complexity. Given Posner's command of economics and law, he has applied economic analysis in only a small number of his opinions. These observations lead to the conclusion that for the vast majority of judges, economic analysis is an interesting perspective on positive law but is not a practical tool for deciding cases.

Economic analysis has become a dominant, albeit controversial new approach to jurisprudence. Due in large part to Posner, economic analysis in the law has grown in acceptance, although primarily in legal education and scholarship. However, as a standard for judicial decisionmaking, economic

\textsuperscript{168} 733 F.2d 1262, 1273 n.3 (7th Cir. 1984) (Flaum, J., concurring) (Judge Flaum states that "the issue of monopoly was barely mentioned by the parties below and on appeal," and further that "the statistics cited by the majority to prove the airport's monopoly are not contained in the record before us.").
analysis is too inflexible and its constraints are too numerous. Therefore, the future of economic theory lies in education, scholarship, and possibly legislation, but not to the same extent in the courtroom.

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