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Burying (With Kindness) the Felicific Calculus of Civil Procedure

Linda S. Mullenix

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Burying (With Kindness) the Felicific Calculus of Civil Procedure

*Linda S. Mullenix**

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I. INTRODUCTION

On January 2, 1986, Judge Richard Posner of the United States Court of Appeals for the Seventh Circuit announced to an astonished legal profession, not to mention the unsuspecting attorneys-of-record, that, in the future, the Seventh Circuit would decide whether to grant or deny a preliminary injunction by applying the following simple formula:

$$P \times H_p > (1-P) \times H_d^1$$

With one fell swoop of his algebraic-judicial pen, Judge Posner not only stirred the deepest math anxieties of the practicing bar, but revolutionized preliminary injunction law. Despite Judge Posner's protestations that his simple formula was not "offered as a new legal standard,"² preliminary injunction law will never be the same.

This Article addresses the transcendental question raised by this preliminary injunction formula: What hath Judge Posner wrought? On sober reflection, it is abundantly clear that Judge Posner's preliminary injunction formula sprang full-blown from the head of an academic-economist turned judge. The preliminary injunction formula is a logical extension of Judge Posner's desire to impose econometrics on all aspects of the law.³ Dissatisfied with the untidiness of mere mortal judicial decisionmaking, Judge Posner intends to rationalize the law by Benthamizing it—by subjecting the law to a twentieth century version of felicific calculus.⁴

This Article sounds the alarm concerning Judge Posner's seemingly innocent mathematical foray into preliminary injunction

* Associate Professor of Law, Columbus School of Law, Catholic University of America. This Article was prepared with the support of a summer research grant from the Columbus School of Law, Catholic University of America.

1. *American Hosp. Supply Corp. v. Hospital Prods. Ltd.*, 780 F.2d 589, 593 (7th Cir. 1985).

2. *Id.*

3. See *infra* Parts III(D) & IV(A). "Econometrics," as it is used here, means the "[b]ranch of economics concerned with application of mathematical economics by use of statistics." *THE CONCISE OXFORD DICTIONARY* 328 (6th ed. 1976).

4. "Felicific calculus" is the term most often applied to Jeremy Bentham's "moral arithmetic" based on the fundamental principle of happiness maximization. For a description of Bentham's elaborate rules for this moral arithmetic and its relation to the law, see E. HALÉVY, *THE GROWTH OF PHILOSOPHIC RADICALISM* 29-33 (M. Morris trans. 1955).

law. Judge Posner's formula should not be viewed simply as an "intellectually diverting" exercise,⁵ but should be recognized for what it truly is: the camel's head in the tent. Judge Posner long has been an advocate of market analysis in appropriate substantive legal contexts such as antitrust, tort, corporation, securities, and tax law.⁶ With his preliminary injunction formula, however, he has crossed the great divide between market and nonmarket applications of econometrics.⁷ If Professor Posner has his druthers as a judge, he will reduce all of civil procedure to a neat set of formulas.⁸

This Article argues that Judge Posner's efforts to Benthamize civil procedure are an abomination in theory and practice. Judge Posner's preliminary injunction formula should be "bur[ied] with kindness,"⁹ and any further attempts to quantify civil procedure should be resisted swiftly and sternly. Econometrics should be relegated to limited substantive applications and not engrafted onto inappropriate procedural motions.

Part II of this Article outlines the short happy life of formula Posner.¹⁰ This section first discusses Judge Posner's articulation of the preliminary injunction formula in *American Hospital Supply Corp. v. Hospital Products Ltd.*¹¹ and then describes the formula's reception in the Seventh Circuit and among the district courts. Far from being repudiated outright, Judge Posner's formula has taken shallow root at the trial court level. Significantly, however, trial judges have manifested groping uncertainties in utilizing the new-

5. *Ball Memorial Hosp., Inc. v. Mutual Hosp. Ins., Inc.*, 784 F.2d 1325, 1346 (7th Cir. 1986) (Will, J., concurring).

6. See, e.g., Langbein & Posner, *Market Funds and Trust Investment Law* (pts. I & II), 1976 AM. B. FOUND. RES. J. 1; 1977 AM. B. FOUND. RES. J. 1; R. POSNER, *ANTITRUST LAW: AN ECONOMIC PERSPECTIVE* (1976); Posner, *The Rights of Creditors of Affiliated Corporations*, 43 U. CHI. L. REV. 499 (1976); Posner, *The Social Costs of Monopoly and Regulation*, 83 J. POL. ECON. 807 (1975); Posner, *Taxation by Regulation*, 2 BELL J. ECON. & MGMT. SCI. 22 (1971). The arguments of many of these pieces are summarized in various chapters in R. POSNER, *ECONOMIC ANALYSIS OF LAW* (2d ed. 1977) [hereinafter POSNER, *ECONOMIC ANALYSIS OF LAW*].

7. See *infra* Parts III(D) & IV(A); see also R. POSNER, *THE ECONOMICS OF JUSTICE* 1-6 (1981) [hereinafter POSNER, *ECONOMICS OF JUSTICE*].

8. POSNER, *ECONOMIC ANALYSIS OF LAW*, *supra* note 6, at 429-57. Much of this argument is derived from Posner, *An Economic Approach to Legal Procedure and Judicial Administration*, 2 J. LEGAL STUD. 399 (1973) [hereinafter Posner, *Legal Procedure and Judicial Administration*].

9. *Ball Memorial Hosp.*, 784 F.2d at 1347 (Will, J., concurring).

10. With apologies to E. HEMINGWAY, *The Short Happy Life of Francis Macomber*, in *THE SHORT STORIES OF ERNEST HEMINGWAY* 3 (Scribners 1966).

11. 780 F.2d 589 (7th Cir. 1985).

fringed formula. Consequently, recent Seventh Circuit decisions amply demonstrate the many problems inherent in quantifying the preliminary injunction process.

Part III explores the roots of Judge Posner's preliminary injunction formula and illustrates that the formula is a logical extension of Judge Posner's lifelong commitment to rationalizing legal substance and procedure. This section demonstrates that Judge Posner is an intellectual heir of Jeremy Bentham, who attempted to develop a felicific calculus of the law,¹² and Judge Learned Hand, who attempted to develop algebraic torts.¹³ More recently, Professor John Leubsdorf has provided Judge Posner with an economic analysis of preliminary injunctions, stressing minimization of error through probabilistic calculations.¹⁴ This section further demonstrates that these intellectual strands have merged in Professor Posner's writing and Judge Posner's decisions.¹⁵ More importantly, however, this section exposes the problems associated with applying econometric methodology to civil procedure, including the methodology's reliance on unsound premises, uncertain probabilistic assessments, implicit subjectivity, and illusory objectivity.

Part IV demonstrates that Judge Posner's preliminary injunction formula is not an isolated decisional novelty. Instead, the formula represents an initial foray into mathematical civil procedure. Unless the formulaic approach is reproved swiftly, the legal profession can expect Judge Posner to announce additional procedural formulas. Judge Posner's efforts to Benthamize civil procedure should be rejected because they undermine principled decisionmaking.

This Article is not merely about preliminary injunctions.¹⁶ Nor is it a roaming discussion of the ever-burgeoning field of law and economics.¹⁷ Rather, it is an article that rejects and warns of the

12. See *supra* note 4.

13. See *United States v. Carroll Towing Co.*, 159 F.2d 169 (2d Cir. 1947); see also *infra* Part III(B).

14. See Leubsdorf, *The Standard for Preliminary Injunctions*, 91 HARV. L. REV. 525 (1978); see also *infra* Part III(C).

15. See *infra* Part III(D).

16. For recent discussion and analysis of preliminary injunction law, see generally Black, *A New Look At Preliminary Injunctions: Can Principles From The Past Offer Any Guidelines To Decisionmakers in the Future?*, 36 ALA. L. REV. 1 (1984); Hammond, *Interlocutory Injunctions: Time For A New Model?*, 30 U. TORONTO L.J. 240 (1980).

17. For a broad survey of recent literature in law-and-economics theory, see POSNER, *ECONOMIC ANALYSIS OF LAW*, *supra* note 6, at xvii-xxiii & 4-23; POSNER, *ECONOMICS OF JUSTICE*, *supra* note 7, at 1-9; West, *Authority, Autonomy, and Choice: The Role of Consent in*

incipient Benthamization of civil procedure. In the final analysis, this Article is an attempt to supply reasoned argument to one district judge's plaintive response to Judge Posner's preliminary injunction formula: "[I]f it ain't broke, don't fix it."¹⁸

II. THE SHORT HAPPY LIFE OF FORMULA POSNER

A. American Hospital Supply and the Formula for Preliminary Injunctions

Judge Posner first announced his preliminary injunction formula in *American Hospital Supply Corp. v. Hospital Products Ltd.*¹⁹ The concepts embodied in the formula, however, can be found in *Roland Machinery Co. v. Dresser Industries, Inc.*²⁰ and other earlier Posner decisions.²¹ In *American Hospital Supply*, an otherwise ordinary appeal, Judge Posner upheld a preliminary injunction that prevented a supplier from terminating a contract with a distributor of surgical stapling systems.²² While paying lip-service to the standard four-factor test courts commonly utilize in deciding whether to grant or deny preliminary injunctions, Judge Posner deftly shifted analysis away from traditional equitable concerns and refocused on a more scientific inquiry—the minimization

the Moral and Political Visions of Franz Kafka and Richard Posner, 99 HARV. L. REV. 483, 483-85, nn.1-4 (1985).

18. *Ball Memorial Hosp., Inc. v. Mutual Hosp. Ins., Inc.*, 784 F.2d 1325, 1347 (7th Cir. 1986) (Will, J. concurring).

19. 780 F.2d 589 (7th Cir. 1986).

20. 749 F.2d 380 (7th Cir. 1984). In *Roland Machinery*, Judge Posner gave the fullest verbal exposition of the error-minimizing theory of preliminary injunctions, without the mathematical expression that would follow in *American Hospital Supply*:

[T]he task for the district judge in deciding whether to grant or deny a motion for preliminary injunction is to minimize errors: the error of denying an injunction to one who will in fact (though no one can know this for sure) go on to win the case on the merits, and the error of granting an injunction to one who will go on to lose. The judge must try to avoid the error that is more costly in the circumstances. That cost is a function of the gravity of the error if it occurs and the probability that it will occur. The error of denying an injunction to someone whose legal rights have in fact been infringed is thus more costly the greater the magnitude of the harm that the plaintiff will incur from the denial and the greater the probability that his legal rights really have been infringed. And similarly the error of granting an injunction to someone whose legal rights will turn out not to have been infringed is more costly the greater the magnitude of the harm to the defendant from the injunction and the smaller the likelihood that the plaintiff's rights really have been infringed.

Id. at 388.

21. See, e.g., *Shondel v. McDermott*, 775 F.2d 859 (7th Cir. 1985) (Posner, J., with Cudahy & Pell, J.J.); *Maxim's Ltd. v. Badonsky*, 772 F.2d 388 (7th Cir. 1985) (Cudahy, J., with Coffey & Peck, J.J.) (relying on *Roland Machinery*, 749 F.2d 380).

22. *American Hosp. Supply*, 780 F.2d at 592-93, 598-600.

of error.²³

Judge Posner's economic view of preliminary injunctions is tidy and internally logical. Preliminary injunctions, by their nature, are granted or denied often on incomplete, inadequate records in hasty proceedings. The proceedings are fraught with opportunities for error, and decisional mistakes can prove costly to the losing litigant. The function of the judge in the preliminary injunction context, therefore, is to minimize error—"[t]o choose the course of action that will minimize the costs of being mistaken."²⁴ The judge's analysis, therefore, must focus on the relative costs of a mistaken injunction to either the plaintiff or the defendant. If a judge erroneously grants a preliminary injunction to a plaintiff who is not entitled to such relief, "the judge commits a mistake whose gravity is measured by the irreparable harm, if any, that the injunction causes to the defendant while it is in effect."²⁵ If, on the other hand, a judge erroneously denies a preliminary injunction to a deserving plaintiff, "the judge commits a mistake whose gravity is measured by the irreparable harm, if any, that the denial of the preliminary injunction does to the plaintiff."²⁶

Once the costs of these mistakes are defined, the probability that these mistakes will be made can be compared and the less "costly" option selected by means of a simple formula:

[A judge should] grant the preliminary injunction if but only if $P \times H_p > (1-P) \times H_d$ or, in words, only if the harm to the plaintiff if the injunction is denied, multiplied by the probability that the denial would be an error (that

23. *Id.* at 593-94. Judge Posner conceptualized the "familiar four (sometimes five) factor test" as follows:

[1] whether the plaintiff will be irreparably harmed if the preliminary injunction is denied, [2] . . . whether the plaintiff has an adequate remedy at law, [3] whether the harm to the plaintiff if the preliminary injunction is denied will exceed the harm to the defendant if it is granted, [4] whether the plaintiff is reasonably likely to prevail at trial, and [5] whether the public interest will be affected by granting or denying the injunction.

Id. In *Roland Machinery* Judge Posner suggested a possible sixth factor: whether the preliminary injunction will preserve the status quo. 749 F.2d at 383. For a discussion of these factors and the standards for preliminary injunction review, see generally O. FISS, *INJUNCTIONS* (1972); 11 C. WRIGHT & A. MILLER, *FEDERAL PRACTICE AND PROCEDURE: CIVIL* §§ 2941-2950 (1973).

The author does not dispute that the standards for preliminary injunction are in disarray among the circuits and suffer from vague, ambiguous formulations. The best recent critique of current standards is supplied in Leubsdorf, *supra* note 14, at 525. Notwithstanding the multitude of problems attending preliminary injunction determinations, Judge Posner's approach has not improved the law, but worsened it. See *infra* Part IV(B).

24. *American Hosp. Supply*, 780 F.2d at 593.

25. *Id.*

26. *Id.*

the plaintiff, in other words, will win at trial), exceeds the harm to the defendant if the injunction is granted, multiplied by the probability that granting the injunction would be an error. That probability is simply one minus the probability that the plaintiff will win at trial; for if the plaintiff has, say, a 40 percent chance of winning, the defendant must have a 60 percent chance of winning ($1.00 - .40 = .60$). The left-hand side of the formula is simply the probability of an erroneous denial weighted by the cost of denial to the plaintiff, and the right-hand side simply the probability of an erroneous grant weighted by the cost of grant to the defendant.²⁷

Anticipating professional resistance to this formulation, Judge Posner carefully accompanied his succinct mathematical exposition with numerous apologies. The formula, Judge Posner professed, was not a new legal standard,²⁸ but merely a distillation of existing preliminary injunction factors:²⁹ "The analysis it capsulizes is standard."³⁰ The formula was not intended "to force analysis into a quantitative strait jacket,"³¹ but to assist judges in the assessment of elements and to aid judges in determining the error-minimizing course of action.³² Moreover, Judge Posner pointed out, algebraic expression of legal concepts was not novel, as evidenced by Judge Learned Hand's "famous negligence formula."³³

Judge Posner's caveats, however, are disingenuous. In actuality, Judge Posner's formula is a new legal standard, and it does not merely encapsulate the existing preliminary injunction test. The formula is a bold rewriting of preliminary injunction law. Judge Posner's formula represents an effort to sever the preliminary injunction determination from its equitable roots, thereby standing the injunction proceeding on its head.³⁴ It is inaccurate to suggest

27. *Id.*

28. *Id.* But see *id.* at 602 (Swygert, J., dissenting) ("The court today continues what it began in *Roland Machinery v. Dresser Industries* . . . : a wholesale revision of the law of preliminary injunctions.").

29. See *id.* at 593-94; see also *supra* note 23.

30. *American Hosp. Supply*, 780 F.2d at 594.

31. *Id.* at 593.

32. *Id.*

33. *Id.*, citing *United States v. Carroll Towing Co.*, 159 F.2d 169, 173 (2d Cir. 1947); *United States Fidelity & Guar. Co. v. Jadranska Slobodna Plovidba*, 683 F.2d 1022, 1026 (7th Cir. 1982) (Posner, J., decision). For a discussion of Judge Learned Hand's "famous negligence formula," see *infra* Part III(B).

34. Judge Posner's strong antipathy to the equitable discretion permitted judges in the preliminary injunction context is vented graphically in *Shondel v. McDermott*, 775 F.2d 859 (7th Cir. 1985). In *Shondel*, Judge Posner utilized this preliminary injunction case as a bully pulpit to rage against the "free-wheeling ethical discretion" inherent in equity proceedings:

The maxim that "he who comes into equity must come with clean hands," . . . captures very nicely the moralistic, rule-less, natural-law character of the equity jurisprudence created by the Lord Chancellors of England when the office was filled by clerics . . .

that the formula does not force analysis into a quantitative strait jacket. Without quantification, strait-jacketed or not, the formula is meaningless and useless. By its very nature, the formula compels quantification of an unquantifiable process. Finally, Judge Posner's attempt to associate his formula with Learned Hand's "famous negligence formula" is more judicial finesse than judicial fact—Learned Hand's negligence formula hardly is famous and is promoted scantily, except by Judge Posner.³⁵ The point, however, is not to cavil about Judge Posner's own characterizations of his decision, but to demonstrate the poverty of Judge Posner's methodology on its merits.³⁶

Judge Swygert, dissenting in both *Roland Machinery* and *American Hospital Supply*, attacked Judge Posner's decision on two broad grounds: (1) it constituted a "wholesale revision of the law of preliminary injunctions," and (2) it "transgress[ed] the limits of . . . appellate authority."³⁷ Judge Swygert viewed Judge Posner's attempt to quantify the injunction process as "antithetical to the underlying principles of injunctive relief."³⁸ Because equity, by its nature, was founded in ideas of flexibility and discretion, Judge Posner's formula eliminated that traditional mitigating element of equity jurisdiction. The existing four-part standard for preliminary injunctions represented "the historical balance struck by the courts between the rigidity of law and the flexibility of equity."³⁹

[T]he proposition that equitable relief is "discretionary" cannot be maintained today without careful qualification. A modern judge, English or American, state or federal, bears very little resemblance to a Becket or a Wolsey or a More, but instead administers a system of rules which bind him whether they have their origin in law or in equity and whether they are enforced by damages or by injunctions.

Id. at 867-68 (citations omitted).

35. See, e.g., *Davis v. Consolidated Rail Corp.*, 788 F.2d 1260, 1264 (7th Cir. 1986) (Posner, J., decision); *Llaguno v. Mingey*, 763 F.2d 1560, 1564 (7th Cir. 1985) (Posner, J., decision); *United States Fidelity & Guar. Co. v. Jadranska Slobodna Plovidba*, 683 F.2d 1022, 1026 (7th Cir. 1982) (Posner, J., decision); *Evra Corp. v. Swiss Bank Corp.*, 673 F.2d 951, 958 (7th Cir. 1982) (Posner, J. decision). For a discussion of Judge Posner's popularization of Judge Learned Hand's formula, see *infra* Part III(B).

36. Professor Posner charges that his critics attack all of social science methodology rather than critically evaluating positive economic analysis on its merits. See Posner, *Some Uses and Abuses of Economics in Law*, 46 U. CHI. L. REV. 281, 288 (1979) [hereinafter Posner, *Some Uses and Abuses*].

37. *American Hosp. Supply*, 780 F.2d at 602 (Swygert, J., dissenting). See also *Roland Mach.*, 749 F.2d at 396-404 (Swygert, J., dissenting).

38. *American Hosp. Supply*, 780 F.2d at 609 (Swygert, J., dissenting). Judge Swygert's point is that the "precision" demanded by the majority's preliminary injunction formula is antithetical to the necessarily flexible, imprecise nature of equitable decisionmaking.

39. *Id.* Judge Swygert rejected Judge Posner's attempt to create an equitable analog with Learned Hand's negligence formula. Judge Swygert stated:

The essential role of the judge in the preliminary injunction process, therefore, was to "rely on [his] own judgment, not on mathematical quanta."⁴⁰ To Judge Swygert, the prospect of litigating attorneys "dust[ing] off their calculators and dress[ing] their arguments in quantitative clothing"⁴¹ was rueful: "The resulting spectacle will perhaps be entertaining, but I do not envy the district courts of this circuit and I am not proud of the task we have given them."⁴² Judge Swygert further objected to Judge Posner's disregard for the district court's findings. By substituting a "series of imagined harms that might have, but did not, furnish the basis for the grant of the preliminary injunction"⁴³ for the district court's findings, Judge Posner transgressed the limits of appellate review and effectively reviewed the district court's decision *de novo*.⁴⁴

Judge Swygert's criticisms are well founded and form a solid basis for critiquing Judge Posner's efforts to quantify legal proceedings. Formulas invite abuse of the appellate process by allowing, if not requiring, one set of judges to second-guess another's hypothesized calculations of harm or probabilities of success. Because the preliminary injunction formula is precise, the values assigned to imagined harms or hypothesized probabilities

Proceedings in equity and cases sounding in tort demand entirely different responses of a district judge. The judgment of the district judge in a tort case must be definite; the judgment of the district judge in an injunction proceeding cannot, by its very nature, be as definite. The judgment of a district judge in an injunction proceeding must be flexible and discretionary—within the bounds of the now settled four-prong test.

Id.

40. *Id.* Again, reiterating the distinction between equitable determinations and Judge Posner's formula, Judge Swygert emphasized: "Equity, as the majority concedes, involves the assessment of factors that cannot be quantified. A district court faced with the task of deciding whether to issue a preliminary injunction must to some extent, the majority concedes, rely on the 'feel' of the case." *Id.*

41. *Id.* at 610.

42. *Id.*

43. *Id.* at 604.

44. *Id.* at 602-10. In addition to transgressing well-established limits of appellate review, Judge Swygert noted that the majority ironically never attempted to quantify any of the variables in Judge Posner's formula:

We are never told how to measure P or H_D or H_A . I believe, and the majority appears to concede, that a numerical value could never be assigned to these variables. Who can say, for instance, what *exactly* the probability is that granting of the injunction was an error? How then will the majority's formula ease in a meaningful way the responsibilities of the district courts?

Id. at 609 (emphasis in original). Judge Swygert questioned the wisdom of adopting a mathematical formula as the law governing preliminary injunctions and disputed that the formula was "merely a distillation of the traditional four-prong test. But if nothing is added to the substantive law," he queried, "why bother?" *Id.*

are outcome determinative.⁴⁵ Paradoxically, the precision the formula demands is antithetical to the injunctive process and subversive of equity jurisdiction. One of equity's threshold requirements is that the party invoking that jurisdiction have no adequate remedy at law.⁴⁶ In preliminary injunction proceedings, this requirement traditionally has meant that monetary damages cannot compensate the plaintiff's injury⁴⁷ and that the harm the plaintiff will suffer in the absence of an injunction is irreparable—that is, not reparable by monetary damages after trial.⁴⁸ Ironically, Judge Posner's formula requires counsel and judges to do precisely the opposite of what equity demands—quantify the litigant's injuries and harms. Injury, harm, and probability of success each must be assigned a value in order for Judge Posner's formula to make sense. Yet, if these factors can be quantified at the preliminary injunction stage, an adequate remedy at law exists, and the court's equity jurisdiction should not be invoked.

Judge Swygert's insight is perceptive because Judge Posner's formula replaces vague, discretionary, equitable assessments with quantifiable verities.⁴⁹ Ultimately, Judge Posner's quarrel is not with the imprecision of preliminary injunction proceedings, but with equity jurisdiction altogether.⁵⁰ In Judge Posner's ideal judicial universe, mathematical precision would dominate legal decisionmaking, and equity, an untidy anachronism, would be relegated to the dustbin of legal history as a quaint relic of Anglo-American jurisprudence.

B. Reception on the Seventh Circuit of Formula Posner

Judge Posner's preliminary injunction formula has received mixed reviews on the Seventh Circuit, giving rise to some confusion concerning the formula's status as governing precedent.⁵¹

45. See *infra* Part III(C) (discussion of Professor Leubsdorf's preliminary injunction model).

46. See generally O. FISS, *supra* note 23; C. WRIGHT & A. MILLER, *supra* note 23, § 2944.

47. See generally O. FISS, *supra* note 23; C. WRIGHT & A. MILLER, *supra* note 23, §§ 2944, 2948.

48. See generally O. FISS, *supra* note 23; C. WRIGHT & A. MILLER, *supra* note 23, §§ 2944, 2948.

49. The formula simply does not make a great deal of sense unless the variables are quantified—as demonstrated by the cases subsequent to *American Hospital Supply*. See *infra* Parts II(B) & (C).

50. See *supra* note 34; see also *Roland Mach.*, 749 F.2d at 383-84, 389-90.

51. There have been three Seventh Circuit opinions subsequently discussing Judge Posner's preliminary injunction formula as set out in *American Hospital Supply*: Ball Memo-

Although some judges have voiced guarded skepticism, most have accepted the formula as a mathematical shorthand for determining whether or not to grant preliminary injunctions. The decisions, however, illustrate the problems inherent in applying the formula, as well as in integrating it with traditional injunction standards.

In *Lawson Products, Inc. v. Avnet, Inc.*,⁵² the first decision following *American Hospital Supply*, the Seventh Circuit "remove[d] any possible confusion" concerning the status of preliminary injunction law by stating that the principles of *Roland Machinery* and *American Hospital Supply* were "in harmony with the traditionally flexible and discretionary responsibilities of the district judge."⁵³ Judge Posner's preliminary injunction formula, therefore, comes into play only after a plaintiff has satisfied the traditional threshold requirements for equitable relief—no adequate remedy at law, danger of irreparable harm, and likelihood of success on the merits.⁵⁴ The Seventh Circuit held that the formula was not intended to establish a rigid approach to deciding the injunction issue, but rather to supply an "effective shorthand method of expressing the important relationship between the likelihood of success on the merits and the degree of harm to the non-prevailing party."⁵⁵

Notwithstanding this endorsement, the court recognized the significant problems inherent in applying the new formula. First, the court noted that the formula could "create a false impression that the elements of the formula, the magnitudes and probabilities, can be accurately quantified and that through a specified type of mental calculus the singularly 'correct' result can be arrived at

rial Hosp., Inc. v. Mutual Hosp. Ins., Inc., 784 F.2d 1325 (7th Cir. 1986) (Easterbrook, J., for the majority); Brunswick Corp. v. Jones, 784 F.2d 271 (7th Cir. 1986) (Eschbach, J., for the majority); Lawson Prods., Inc. v. Avnet, Inc., 782 F.2d 1429 (7th Cir. 1986) (Flaum, J., for the majority). Although these decisions discuss and affirm Judge Posner's approach, the tenor of the opinions is ambiguous, at best. This is suggested by the concluding paragraph in *Lawson*:

In conclusion, it is important to reemphaize the scope and nature of the preliminary injunction remedy in this circuit. *Roland* and *American Hospital* provide important insights which may be helpful in the exercise of a district judge's discretion. Nevertheless, these decisions, as well as this opinion, represent a continued affirmation of the traditional equitable factors governing injunctions and the classic roles of both district and appellate courts.

782 F.2d at 1441. The status of Judge Posner's injunction formula was undermined further by Judge Will's concurring opinion in *Ball Memorial Hospital*, 784 F.2d at 1346-47.

52. 782 F.2d 1429 (7th Cir. 1986).

53. *Id.* at 1432.

54. *Id.* at 1433.

55. *Id.* at 1434.

with some exactitude."⁵⁶ Such quantification was at any rate misleading, the court noted, because the elements of the preliminary injunction formula could be quantified only by mediating subjective value judgments.⁵⁷

Second, the court recognized that the formula implies that a single, "correct" result is achievable. Equity, on the other hand, requires a "just" or "fair" result, rather than a mathematically correct one.⁵⁸ Although a court's inability to measure damages often is the reason for seeking an injunction, the formula requires such a measurement.⁵⁹ To the extent that the formula engrafts legalistic formalism onto a traditional equitable remedy, the court noted, it changes the law:

[I]t is impossible to think in terms of a single correct result. In each case there exist a number of fair accommodations. If a rigid formulaic approach is used, where the motion is granted only if $X > Y$ or so many stated criteria are met, one of the central questions, what kind or degree of relief is appropriate, is not answered. As the type of relief varies the parameters of the injunction equation will also change, making it very difficult to achieve the accurate, cost-minimizing result. Implicit in equity's connection to the vague concept of fairness is a need for flexibility.⁶⁰

Finally, while the court reiterated that *Roland Machinery* and *American Hospital Supply* remained the law of the circuit, it issued the *coup de grace* to Posner's formulaic approach by concluding that preliminary injunction decisions ultimately were intuitive and incapable of quantification. The court stated:

The ultimate decision of whether or not to grant the motion is in a real sense intuitive. The law of injunctions tells the judge what factors are relevant but . . . the balancing and weighing process is not susceptible to quantification or formalization. Ultimately, the district judge has to arrive at a decision based on a subjective evaluation of the import of the various factors and a personal, intuitive sense about the nature of the case.⁶¹

56. *Id.* For a generalized discussion of the problem of "illusory objectivity," see *infra* Part III(C)(2)(d).

57. *Id.* For a generalized discussion of the problem of "implicit subjectivity," see *infra* Part II(C)(2)(c). The *Lawson* court noted:

The obvious problem with this is that the impression is false: a figure representing the probability of success can be arrived at only through a subjective estimate by the court and the magnitudes of harm are rarely susceptible to quantification because of the subjective values, externalities, and effects on the public interest that may be involved in an injunction case.

782 F.2d at 1434. For a generalized discussion of the problem of "implicit subjectivity," see *infra* Part III(C)(2)(c).

58. 782 F.2d at 1435.

59. *Id.*

60. *Id.*

61. *Id.* at 1436. the court repeatedly expressed its ambivalence concerning the utility

Rather than repudiate Judge Posner's formula outright, the *Lawson* majority reaffirmed the formula's utility while offering compelling reasons for its rejection. By reaffirming Posner's formulaic approach, the *Lawson* court endorsed a binding precedent of dubious and questionable validity. It is not surprising, then, that two subsequent Seventh Circuit opinions⁶² represent the denouement of formula Posner. This denouement is most evident in *Ball Memorial Hospital, Inc. v. Mutual Hospital Insurance, Inc.*⁶³ In *Ball* the Seventh Circuit affirmed a district court's decision to deny a preliminary injunction, which had been based on traditional preliminary injunction analysis. In a concurring opinion, Judge Will noted that the quality of justice would not have been improved had the district judge applied Judge Posner's formula.⁶⁴ Viewing *Lawson* and *Ball Memorial Hospital* together, Judge Will concluded that the Seventh Circuit has attempted to "bury with kindness" the legal revisionism undertaken in *Roland* and *American Hospital*.⁶⁵ Heartily concurring in this effort, Judge Will stated: "There is an old and wise saying: 'if it ain't broke, don't fix it.' As evidenced by [the district judge's] decision and opinion, the traditional standards 'ain't broke.'" ⁶⁶

C. Reception in the District Courts of Formula Posner

It is unnecessary to dwell at length on the district courts' reaction to Judge Posner's formula except to note that they have accepted the formula as the legal standard for preliminary injunctive relief and have had difficulty applying it. The district courts apparently disagree concerning exactly what the formula embodies

of Judge Posner's mathematical approach: "We are convinced that the system, despite its real and semantic shortcomings . . . has acceptably performed its function over the years and is not in need of a drastic overhaul." *Id.* at 1434.

62. *Ball Memorial Hosp., Inc. v. Mutual Hosp., Inc.*, 784 F.2d 1325 (7th Cir. 1986); *Brunswick Corp. v. Jones*, 784 F.2d 271 (7th Cir. 1986).

63. 784 F.2d 1325 (7th Cir. 1986). The single most interesting aspect of the *Ball Memorial Hospital* opinion is that it is authored by Circuit Judge Easterbrook, Judge Posner's former junior faculty colleague at the University of Chicago Law School, and co-author of an antitrust casebook. See R. POSNER & F. EASTERBROOK, *ANTITRUST: CASES, ECONOMIC NOTES AND OTHER MATERIALS* (2d ed. 1981); see also Easterbrook, *Method, Result, and Authority: A Reply*, 98 HARV. L. REV. 622 (1985) (response to Tribe, *Constitutional Calculus: Equal Justice or Economic Efficiency?*, 98 HARV. L. REV. 592 (1985)). The *Ball Memorial Hospital* opinion can be viewed as a less than stirring endorsement of formula Posner by a fellow colleague and like-minded law-and-economics devotee.

64. *Ball Memorial Hosp.*, 784 F.2d at 1347 (Will, J., concurring).

65. *Id.*

66. *Id.*

and what to do with the "public interest" element of traditional preliminary injunction analysis. More significantly, the courts have conceded that while the formula requires quantification, the best that can be mustered in real situations are rough estimations of harms and probabilities. In short, while accepting Judge Posner's formula and reiterating its significance, the lower courts are doing exactly what they always have done in injunction proceedings—exercising equitable discretion in order to achieve rough justice.

*MidCon Corp. v. Freeport-McMoran, Inc.*⁶⁷ illustrates these trends. In *MidCon* the plaintiff, a pipeline corporation that was the target of a tender offer, sought a preliminary injunction to enjoin its acquisition by the defendant.⁶⁸ The court noted that the Seventh Circuit had reduced the four traditional preliminary injunction factors to an algebraic formula and that both the plaintiff and the defendant could be irreparably harmed by an erroneous injunction decision.⁶⁹ The court further recognized that the traditional public interest element of preliminary injunction analysis could support either the plaintiff or the defendant, but that in the present case the public's interest was negligible because it was difficult to discern how the public would be affected by a change in the corporation's ownership.⁷⁰ Because the plaintiff and defendant would suffer roughly the same injuries from an erroneously granted injunction, the solution to Judge Posner's equation depended on the plaintiff's ability to show "a better than 50 percent chance of winning the case."⁷¹ Characterizing the plaintiff's chance as a long shot,⁷² the court denied injunctive relief.

MidCon is striking in many respects. First, the court neglected to analyze the traditional threshold elements necessary for a preliminary injunction and simply considered the traditional factors incorporated in Judge Posner's formula.⁷³ By so doing, the court

67. 625 F. Supp. 1475 (N.D. Ill. 1986).

68. *Id.* at 1476-79.

69. *Id.* at 1479. The court stated: "In *American Hospital Supply Corporation v. Hospital Products Limited* . . . , Judge Posner reduced these factors to an algebraic formula"

70. *Id.* at 1482. The court noted: "At first blush, Judge Posner's formula seems to ignore the public interest. The public interest, however, may be factored with the injury on either side of the equation, depending on where the public interest lies." *Id.*

71. *Id.* at 1480.

72. *Id.* ("The court is hesitant to handicap a judicial contest and apply percentages to the likelihood of success on the merits; however, in this case plaintiff's chances of success can only be characterized as a long shot.")

73. *Id.* at 1479.

acted contrarily to even Seventh Circuit decisions. Second, the court made no effort to calculate the plaintiff's injury, but merely indicated that the plaintiff would suffer irreparable injury if the proposed merger violated antitrust law and was not enjoined.⁷⁴ Third, the court threw up its figurative hands in trying to assess the harm that the defendant would suffer if an injunction were granted erroneously.⁷⁵ Having conceded the impossibility of its task, the court concluded that blocking an otherwise lawful tender offer would constitute irreparable injury as a matter of law.⁷⁶ Finally, the court made scant effort to quantify the probability that the plaintiff would win at trial, pointing out that "[t]he court is hesitant to handicap a judicial contest and apply percentages to the likelihood of success on the merits."⁷⁷ Nonetheless, because the formula forced the court to quantify this probability, the court boldly calculated the probability "as a long shot."⁷⁸ Plugging these values into the equation, the court concluded that Judge Posner's formula mandated that it deny the plaintiff's request for a preliminary injunction.⁷⁹

The *MidCon* case is a parody of the Posner formula. Although the court set forth the preliminary injunction equation as a legal standard, the court quantified absolutely nothing because it was unable to. Ironically, because the litigants were not required to satisfy traditional threshold equity requirements, they were faced with a stripped-down injunction standard. Consequently, the *Mid-Con* decision turned solely on a "long shot"—the court's ability to quantify the probability of success on the merits. In the final analysis, *MidCon* is a shining example of old-fashioned injunction analysis—rough justice at its best.

Using analysis similar to that used in *MidCon*, the court in *Nagy v. Custom Hoists, Inc.*⁸⁰ also denied plaintiffs' request for a preliminary injunction. In *Nagy*, however, the court construed Judge Posner's decision in *American Hospital Supply* to require consideration of each of the traditional preliminary injunction fac-

74. *Id.* at 1480.

75. *Id.* The court noted: "There are incalculable contingencies—actions by regulatory agencies, *MidCon*'s rescue by a 'white knight', actions by shareholders, changes in the natural gas market—which could obstruct this merger or make it unprofitable for the defendants." *Id.*

76. *Id.*

77. *Id.*

78. *Id.*

79. *Id.* at 1482.

80. 629 F. Supp. 675 (E.D. Wis. 1986).

tors. Indeed, the court recognized that the cardinal virtue of the formula was that it required courts to evaluate each element "rather than hang the parties' fate on just one or another of them."⁸¹

In applying Judge Posner's formula, the *Nagy* court engaged in a *MidCon*-like series of paradoxes and evasions. First, in order to satisfy the requirement that the plaintiffs have no adequate remedy at law, the court concluded that a damages award at the conclusion of any trial "would be extremely speculative."⁸² Second, in order to calculate the balance of harms, the court found that the plaintiffs "risk[ed] a moderate amount of irreparable harm."⁸³ Third, in assessing potential harm to the defendant of an erroneously granted injunction, the court found that "such harm roughly balances the harm plaintiffs would suffer were the injunction denied."⁸⁴ Finally, the court noted that the probability of the plaintiff's prevailing on the merits was "rather low" and that neither party had demonstrated how the public interest would be affected by the injunction.⁸⁵ Because the harms to the plaintiffs and defendant roughly balanced and the public interest did not alter that balance, the plaintiffs' lower probability of success at trial was determinative. Accordingly, the court denied the injunction.⁸⁶

The *Nagy* decision parallels *MidCon* in all respects. While paying lip-service to Posner's formula, the courts in both cases were unable to quantify the formula's crucial variables. The injunction decisions, therefore, turned on one element: the judges' rough sense of the probability of success on the merits. Consequently, except for the fact that Judge Posner's formula has added an appearance of scientism to injunction decisions, nothing has changed.

81. *Id.* at 679. "Under this test it would no longer seem adequate, if ever it was, for a district court merely to announce that it 'finds' irreparable injury, or a likelihood of success, without also assessing how substantial these factors are." *Id.*

82. *Id.* at 680. The court confessed that it was perplexed by the requirement that the plaintiffs show inadequate remedy at law when they enjoyed a statutory exclusion from having to show irreparable harm. *Id.*

83. *Id.*

84. *Id.* at 681.

85. *Id.* at 682.

86. *Id.*

III. THE SQUARE ROOTS OF FORMULA POSNER: ENGRAFTING ECONOMETRICS ONTO THE LAW

A. *Jeremy Bentham and the Felicific Calculus: Imposing Mathematical Logic on the Law*

Judge Posner's writings indicate that he harbors a grudging respect for Jeremy Bentham, the nineteenth century philosopher who last attempted to quantify the law.⁸⁷ Bentham postulated the felicific calculus, a method of codifying the law based on the "greatest happiness" utility principle.⁸⁸ As Judge Posner knows very well,⁸⁹ Bentham's utilitarian ethics and felicific calculus long have been discredited.⁹⁰ Nonetheless, Bentham's methodology and overarching criticisms of equity jurisdiction appeal greatly to Judge Posner.

Bentham had little to say about injunctions, but what he did say was not especially charitable. At best, Bentham considered injunctive requests vexatious disruptions of an ongoing lawsuit. In Bentham's words: "[A]n injunction is an entire suit, a second suit, and that an equity one, piled upon the first. The common-law suit is a dwarf; the equity suit, a giant mounted upon his shoulders."⁹¹ Bentham viewed injunctive proceedings as an abuse of process,⁹² but he reserved true vituperation for equity jurisdiction: "When common law had picked the bones of a cause, equity comes in and sucks the marrow."⁹³ After noting that equity jurisdiction was based on a "few scanty and incoherent scraps,"⁹⁴ Bentham con-

87. Bentham's voluminous writings are published in the multi-volume collection, *WORKS OF JEREMY BENTHAM* (J. Bowring ed. 1843) [hereinafter *BENTHAM WORKS*]. For various discussions of Bentham by Professor Posner, see Posner, *Some Uses and Abuses*, *supra* note 36, at 281-83; POSNER, *ECONOMICS OF JUSTICE*, *supra* note 7, at 13-47. See also Leubsdorf, *supra* note 14, at 532.

88. See generally J. BENTHAM, *A Fragment on Government; Or a Comment on the Commentaries*, in 1 *BENTHAM WORKS*, *supra* note 87, at 221; J. BENTHAM, *An Introduction to the Principles of Morals and Legislation*, in 1 *BENTHAM WORKS*, *supra*, at 1. The "greatest-happiness" or utility principle posited that "the test of sound social policy was whether it promoted the greatest happiness of the greatest number of people." POSNER, *ECONOMICS OF JUSTICE*, *supra* note 7, at 33 (citing Joseph Priestley as one of the many intellectual antecedents of Bentham's greatest happiness utilitarianism).

89. POSNER, *ECONOMICS OF JUSTICE*, *supra* note 7, at 50-60.

90. Utilitarian ethics and the notion of a felicific calculus subsequently were questioned by John Stuart Mill, Bentham's most famous disciple. See generally J. PLAMENATZ, *THE ENGLISH UTILITARIANS* (2d rev. ed. 1958).

91. 7 *BENTHAM WORKS*, *supra* note 87, at 299.

92. *Id.* at 299-300.

93. *Id.* at 300.

94. *Id.*

cluded his extended attack on equity jurisdiction with the following rhetorical flourish: "Chaos is the grand rampart of chicane: and for the organization of chaos, the services of equity have been beyond price."⁹⁵ Bentham's wrath, however, was not reserved for equity jurisdiction. He also was dismayed at evidentiary defects in interlocutory proceedings, an insight that spurred the systematization of equitable rules and the restraint of equitable discretion.⁹⁶

Judge Posner goes to great lengths to distinguish his economic analysis from Bentham's utilitarianism.⁹⁷ Although diverting, Judge Posner's argument proves too much. Judge Posner's wealth maximization principle is undisputably distinguishable from Bentham's greatest happiness theorem. This digression, however, disguises Judge Posner's grudging admiration for the entirety of Bentham's task—the rationalization and systematization of the law of England.⁹⁸ Specifically, one senses Judge Posner's palpable sympathy for the perceived obstacles to Bentham's proposed judicial reforms: "(1) the common law system of lawmaking, and the lawyers and judges who had a vested interest in the system; (2) intellectual confusion rooted in semantic ambiguity; and (3) England's elaborately balanced, imperfectly representative governmental system."⁹⁹ If one substitutes "America" for "England" in the third obstacle, Bentham's frustrations clearly are Judge Posner's. According to Judge Posner, Bentham believed "that the major obstacle to reform was the ignorance or confusion of the people in power—if only their minds could be cleared, his suggested reforms would be promptly implemented. And he thought intellectual confusion was rooted in linguistic imprecision. Figurative language in particular shielded people from recognizing the error of habitual

95. *Id.*

96. 2 J. BENTHAM, *RATIONALE OF JUDICIAL EVIDENCE* 276-86 (J.S. Mill ed. 1827); 4 J. BENTHAM, *supra*, at 630-37. This point also is made by Professor Leubsdorf. *See* Leubsdorf, *supra* note 14, at 532.

97. *See* POSNER, *ECONOMICS OF JUSTICE*, *supra* note 7, at 48-87. Typical of this analysis is the following:

My doubts that Benthamism, utilitarianism in its most uncompromising form, is an adequate ethical system may seem also to undermine the economic analysis of law in both its positive and normative versions The important question is whether utilitarianism and economics are distinguishable. I believe they are and that the economic norm I shall call "wealth maximization" provides a firmer basis for ethical theory than utilitarianism does.

Id. at 48.

98. *See, e.g., id.* at 35-39.

99. *Id.* at 36.

belief."¹⁰⁰ Bentham's laments are Judge Posner's. If only Judge Posner could sweep away ignorance and confusion in the minds of judges and lawyers, economic analysis of the law would prevail throughout the judicial system.¹⁰¹ If Judge Posner had his way, linguistic imprecision, particularly the conceptual muddiness embodied in equity proceedings, would be abandoned in favor of scientific expression of legal concepts.¹⁰²

Judge Posner does not need elaborately to distance his intellectual framework from Bentham's because no one seriously doubts the distinctions between their underlying premises.¹⁰³ At heart, however, the two economists are kindred spirits: "individual[s] of prodigious intellect, energies, and good will."¹⁰⁴ The only startling thing is that Judge Posner is unable to recognize that his economic approach to procedure is doomed for the same reasons that Bentham's felicific calculus is so ridiculous.¹⁰⁵

B. Learned Hand and Algebraic Torts

In *American Hospital Supply* Judge Posner offered his preliminary injunction formula as "a procedural counterpart to Judge Learned Hand's famous negligence formula" articulated in *United States v. Carroll Towing Co.*¹⁰⁶ The purpose of this reference, pre-

100. *Id.* at 37 (footnote omitted).

101. See, e.g., *Roland Mach. Co. v. Dresser Indus., Inc.*, 749 F.2d 380, 382-84 & 388-89 (7th Cir. 1984). In *Roland Machinery* Judge Posner attacked imprecise language: "As so often in law the trouble comes from using the same word in different senses." *Id.* at 388.

102. Judge Posner's lengthy preface to his error-minimizing mathematical approach is a diatribe on the lack of clarity in current judicial standards. The key theme is the ambiguity and "blurred picture" imprecise language causes, which of course can be remedied by quantification:

Our discussion of the standard for ruling on requests for preliminary injunctions, and of the standard for appellate review of such rulings, should have made clear that it is not possible to reconcile all the precedents, or even just all the ones in this circuit. But the apparent discord is mostly verbal. Beneath the welter of apparently conflicting precedents we sense agreement on the following principles . . .

Roland Mach., 749 F.2d at 385-86.

103. Professor Posner quite clearly draws this distinction himself: "I have tried to develop a moral theory that goes beyond classical utilitarianism and holds that the criterion for judging whether acts and institutions are just or good is whether they maximize the wealth of society." POSNER, *ECONOMICS OF JUSTICE*, *supra* note 7, at 115. See generally *id.* at 48-115.

104. *Id.* at 41. Professor Posner writes of Bentham: "His unexamined faith in his own altruistic motivation and in the power of individual intellect (his own), his restless do-goodism, his love of mechanical and intellectual gimmickry, his impatient prose, his neologisms . . . but above all, his faith in *plans*, make him uncannily contemporary." *Id.* at 42.

105. For Posner's critique of utilitarian ethics, see *id.* at 48-87.

106. 780 F.2d at 593, *citing* *United States v. Carroll Towing Co.*, 159 F.2d 169, 173 (2d

sumably, is to reinforce the use of a mathematical construct in a procedural context with an analog from substantive law. This flying buttress of support, so to speak, collapses for two reasons. First, Judge Hand's formula simply is not famous, in any sense. Second, this analog from tort law is not transferable to procedure.

Judge Posner's characterization of the Hand negligence formula as "famous" is highly overstated, unless he means "famous" in the Andy Warholian sense.¹⁰⁷ If fame is measured by acceptance in judicial canons, the Hand formula is barely famous and certainly not successful. In the forty years since its explication, the formula has been utilized four times, all in Seventh Circuit decisions written by none other than Judge Posner.¹⁰⁸ Thus, Judge Posner is the great popularizer of Hand's negligence formula and is directly responsible for whatever current fame it enjoys.

More seriously, the negligence formula is not a methodology transferable to procedure. The Hand formula posits three variables: (1) B, the burden of taking the precautions necessary to avert an accident; (2) L, the loss incurred if an accident occurs; and (3) P, the probability of an accident occurring if precautions are not taken. An alleged tortfeasor is negligent where $B < PL$: where the burden of taking necessary precautions is less than the harm incurred if the accident occurs, discounted by the probability that it might occur.¹⁰⁹ Although Judge Posner suggests that these variables need not be quantified,¹¹⁰ they can be spelled out to yield a mathematically precise result. This simply is not true for preliminary injunctions. As Judge Swygert aptly noted:

A quantitative approach may be an appropriate and useful heuristic device in determining negligence in tort cases, but it has limited value in determining whether a preliminary injunction should issue. Proceedings in equity and cases sounding in tort demand entirely different responses of a district judge. The judgment of the district judge in a tort case must be definite; the judgment of a district judge in an injunction proceeding cannot, by its very nature, be as definite.¹¹¹

Cir. 1947).

107. Andy Warhol is noted for his famous epigram: "In the future everyone will be famous for fifteen minutes." See Warhol, *dictum* 1960s, in MORROW'S INTERNATIONAL DICTIONARY OF CONTEMPORARY QUOTATIONS 80 (J. Green ed. 1982).

108. *Davis v. Consolidated Rail Corp.*, 788 F.2d 1260, 1263-64 (7th Cir. 1986); *American Hosp. Supply*, 780 F.2d at 593; *Llaguno v. Mingey*, 763 F.2d 1560, 1564 (7th Cir. 1985); *United States Fidelity & Guar. Co. v. Jadranska Slobodna Plovidba*, 683 F.2d 1022, 1026 (7th Cir. 1982).

109. *Carroll Towing Co.*, 159 F.2d at 173.

110. *United States Fidelity & Guar. Co.*, 683 F.2d at 1026 (7th Cir. 1982).

111. *American Hosp. Supply*, 780 F.2d at 609.

It is not surprising that Judge Learned Hand's not-so-famous negligence formula has failed to gain acceptance in tort law. The formula has been fairly criticized for its emphasis on economic efficiency and lack of concern for human variables and individual rights.¹¹² Judge Posner's attempt to engraft a mathematical model onto an equity proceeding is subject to similar criticisms, but on an even larger scale.

C. John Leubsdorf on Preliminary Injunctions

1. Minimizing Error Through Probabilistic Calculations

In a 1978 article¹¹³ Professor John Leubsdorf laid the groundwork for Judge Posner's preliminary injunction formula.¹¹⁴ Indeed, the criticisms sounded in that article are repeated in Judge Posner's preliminary injunction decisions.¹¹⁵ Professor Leubsdorf explored three major themes: (1) the incoherence of the preliminary injunction standard; (2) the inadequacies of equitable maxims in injunctive proceedings; and (3) the goal of minimizing error through a balancing of harms to litigants. Far from a novel construct, Judge Posner's formula is derived completely from Professor Leubsdorf's work.

Professor Leubsdorf correctly recognized the unsatisfactory state of preliminary injunction law. He noted that the injunction standard suffered from inconsistent formulations¹¹⁶ and suggested that courts had little reason for choosing one formulation over another. Preliminary injunction law rested on no coherent theory, and often the standard bore little relation to the result in any case.¹¹⁷ Professor Leubsdorf also demonstrated that no major theo-

112. W. KEETON, D. DOBBS, R. KEETON & D. OWEN, *PROSSER AND KEETON ON TORTS* § 31, n.46 (5th ed. 1984) [hereinafter *PROSSER & KEETON ON TORTS*] (citing Rodgers, *Negligence Reconsidered: The Role of Rationality in Tort Theory*, 54 S. CAL. L. REV. 1 (1980); Tribe, *Technology Assessment and the Fourth Discontinuity: The Limits of Instrumental Rationality*, 46 S. CAL. L. REV. 617 (1973); Hubbard, *Reasonable Human Expectations: A Normative Model for Imposing Strict Liability for Defective Products*, 29 MERCER L. REV. 465 (1978)).

113. Leubsdorf, *supra* note 14, at 525.

114. See *American Hosp. Supply*, 780 F.2d at 594; see also *Roland Mach. Co. v. Dresser Indus., Inc.*, 749 F.2d 380, 396 (7th Cir. 1984) (Swygert, J., dissenting).

115. See, e.g., *Roland Mach.*, 749 F.2d at 382-86.

116. See Leubsdorf, *supra* note 14, at 526-40. "This dizzying diversity of formulations, unaccompanied by any explanation for choosing one instead of another, strongly suggests that the phrases used by the courts have little impact on the result in particular cases." *Id.* at 526.

117. *Id.* at 526-40.

retical advancements have occurred in preliminary injunction law in more than a century, despite legislative attempts to codify a standard. Instead, "traditional language filtered back into the jurisprudence . . . by way of statutory construction that preserved judicial discretion to deny relief under equitable principles even when the plaintiff met the statutory tests."¹¹⁸ The major practical problems faced by judges making preliminary injunction decisions involve "vague balancing," "vague inherited phrases," and intuitive analysis:¹¹⁹ themes echoed by Judge Posner.¹²⁰

Professor Leubsdorf's critique of equitable decisionmaking leads naturally to his proposal for a preliminary injunction model that minimizes "the probable irreparable loss of rights caused by errors incident to hasty decision."¹²¹ The purpose of adopting a more specific injunction standard is to decrease the number of incorrect interlocutory relief decisions. The key to Professor Leubsdorf's analysis, then, is to minimize harm by investigating the impact of an erroneous interim decision. In assessing harm to legal rights, courts should consider two factors: (1) the likelihood of prevailing on the merits at trial; and (2) "the probable loss of rights to each party if it acts on a view of the merits that proves to be erroneous."¹²² The court must choose the course that inflicts the least irreparable harm. Professor Leubsdorf describes the court's role as follows:

The court, in theory, should assess the probable irreparable loss of rights an injunction would cause by multiplying the probability that the defendant will prevail by the amount of irreparable loss that the defendant would suffer if enjoined from exercising what turns out to be his legal right. It should then make a similar calculation of the probable irreparable loss of rights to the plaintiff from denying the injunction. Whichever course promises the smaller probable loss should be adopted.¹²³

Judge Posner clearly adopted this verbal formulation wholesale in a series of preliminary injunction cases, culminating in *American Hospital Supply*.

118. *Id.* at 538.

119. *Id.* at 540 ("Much of the precision, however, is illusory; except in the few cases where one of the preliminary inquiries succeeds, courts must proceed to the vague balancing stage Although the vague inherited phrases used by courts may conceal differing approaches to the preliminary injunction, examination of the cases yields the impression that judges on both sides of the Atlantic are struggling with the same problem in much the same way.")

120. *See, e.g., Roland Mach.*, 749 F.2d at 382-86 (7th Cir. 1984).

121. Leubsdorf, *supra* note 14, at 541.

122. *Id.*

123. *Id.* at 542 (footnote omitted).

Although he concedes that "reducing this model to hard figures is usually impractical,"¹²⁴ the guts of Professor Leubsdorf's proposal is its illustration. Professor Leubsdorf posited the following example in order to illustrate his analysis:

Suppose the plaintiff is an indigent who claims additional welfare payments of \$20 per month. With these payments, he could buy food in bulk at reduced rates, increasing his purchasing power by \$32 per month. If five months will elapse before final judgment, the defendant agency has \$100 at stake and the plaintiff \$160. Although calculable, these potential losses are irreparable because the plaintiff is judgment-proof and the defendant has sovereign immunity from a judgment for payments due in previous months. The judge also estimates that the plaintiff's claim has a 40% chance of success at trial.¹²⁵

Having hypothesized these facts and assumptions, Professor Leubsdorf argued that a judge can calculate accurately the potential irreparable harm to the litigants of an erroneously granted injunction:

If the defendant must pay the plaintiff's claim during the litigation, it will spend \$100 with a 60% chance that the payments will be found legally unnecessary. Therefore, the defendant's probable irreparable loss of rights from the grant of relief is \$60. The plaintiff's probable irreparable loss from the denial of relief, based on a similar calculation, is 40% of \$160, or \$64. Since the estimated \$64 loss from denying relief exceeds the estimated \$60 loss from granting it, the judge should grant a preliminary injunction.¹²⁶

Professor Leubsdorf argued that this mathematical assessment of injunctive relief is preferable because it renders a just result that otherwise might be counterintuitive. For example, in the above hypothetical, a judge might intuitively have concluded that the defendant's greater probability of success outweighed the plaintiff's greater potential injury.¹²⁷ Professor Leubsdorf further argued that this approach is superior because it eliminates subjective value judgments that might cloud a judge's evaluations, such as "vague generalizations about the impact of deprivations on the poor or the need to protect the public from bogus claimants."¹²⁸

2. The Fallacies of Applied Econometrics in Civil Procedure

Although Professor Leubsdorf's example is seductive, when carefully scrutinized it illustrates the frailties of Benthamizing procedural motions. Professor Leubsdorf's example is deceptively

124. *Id.*

125. *Id.* (footnotes omitted).

126. *Id.* (footnote omitted).

127. *Id.* at 543.

128. *Id.*

appealing because it hypothesizes a situation in which a highly sympathetic plaintiff, an indigent welfare recipient, is pitted against an unsympathetic defendant, a cold government bureaucracy, and benefits from a mathematical approach to a legal dilemma. Professor Leubsdorf's example, however, is less than credible to the extent that it is predicated on a rarely occurring factual basis, when both the plaintiff and defendant are conveniently judgment-proof—one because of indigency and the other because of sovereign immunity. This highly exotic factual situation is necessary, of course, to set the stage for Professor Leubsdorf's assertion of a potential irreparable loss that is nonetheless quantifiable with precision. Life, not to mention preliminary injunction cases, is rarely so thoughtfully tidy.

The major defects in Professor Leubsdorf's approach have little to do with manipulated facts. Professor Leubsdorf's formulation suffers from four essential problems: (1) unsound premises; (2) uncertain probabilistic assessments; (3) implicit subjectivity; and (4) illusory objectivity. These same problems apply equally to Judge Posner's formula and ultimately serve as bases for critiquing the application of mathematical models to procedural motions in general.

a. Unsound First Premises

Professor Leubsdorf's example is premised on an indigent plaintiff who, with an additional twenty dollars per month in welfare benefits, could buy bulk food at reduced rates and thus increase his purchasing power by thirty-two dollars per month. This thirty-two dollars per month increase provides the plaintiff with a one hundred sixty dollar stake in the outcome of the injunction proceeding over a five-month period. The welfare agency's stake in the outcome, on the other hand, is one hundred dollars. Although facially appealing, this fundamental premise is an unsound economic sleight-of-hand. In fact, the indigent's additional twenty dollars per month will buy only twenty dollars worth of groceries, not the thirty-two dollars worth that Professor Leubsdorf would have us believe. Professor Leubsdorf's reference to bulk purchasing is misleading, because while bulk purchasing does effectively lower the cost of goods to the purchaser, the purchaser could not resell twenty dollars worth of bulk groceries for thirty-two dollars on the open market. Professor Leubsdorf realizes this,¹²⁹ but he would

129. See *id.* at 542 n.95 ("Assume that the impact of this change on the grocer is

rather have us believe that the indigent plaintiff has a real, additional twelve dollar stake in the outcome of the proceeding solely because of bulk purchasing. This twelve dollars, however, is not a tangible value received from the welfare agency, but merely the subjective worth to the indigent of the additional groceries purchasable with a twenty dollar increase in welfare benefits.

Once this economic fact is understood, Professor Leubsdorf's calculations are altered radically. If the additional twelve dollars per month is excluded from the calculations, the plaintiff's and the defendant's stakes are the same: one hundred dollars. Assuming that the plaintiff's probability of success on the merits is forty percent and the defendant's is sixty percent, the court should deny the injunction. Because the potential injury to the plaintiff and the defendant are the same, the "likelihood of success on the merits" factor tips the balance. Obviously, this result is the opposite of Professor Leubsdorf's outcome, but it dramatically demonstrates how unsound premises will dictate unsound results.

As the above analysis of Professor Leubsdorf's preliminary injunction formula demonstrates, the outcome of a mathematically calculated procedural motion is manipulated easily. Clearly, one effective method of influencing results is to control assumptions and premises. This method of influencing results is not all that different from the usual litigation scenario. With quantification as the operational standard, however, the role of the attorney is changed greatly. Now, the attorney who marshals the best numbers more likely than not will prevail. The more effective the attorney is at weighting crucial assumptions, the greater the chance of procedural success. At a practical level, the academic economist is likely to become a necessary adjunct in basic litigation strategy, with procedural maneuvering reduced to a swearing contest between economists. This will contribute to, rather than reduce, direct costs of litigation and will make basic procedural motions more complex and inscrutable.

Moreover, by concentrating on manipulating premises, attorneys, in many instances, may ignore selected unquantifiable factors, such as a litigant's risk-taking disposition. Professor Leubsdorf summarily dismisses this criticism, noting that "[a]ttitudes toward risk are hard to measure in a contentious context, and it is

negligible or legally irrelevant."). Professor Leubsdorf must concede this because it economically is correct; the indigent's subjective valuation has no relationship to the reality of the grocer's inventory or sales.

not clear that such personal propensities should affect one's rights."¹³⁰ Although a surprising admission from an advocate of mathematical procedure, this statement accurately captures the essence of the problem. If anything, attitudes toward risk certainly are ascertainable—simply ask the client. Yet the error-minimization approach discounts the human element of risk-taking, denying the risk-taker or the risk-avertter the opportunity to influence the conduct of the litigation.¹³¹ Thus, personal propensity with regard to one's rights is sacrificed on the high altar of mathematical precision.

b. Uncertain Probabilistic Assessments

In Professor Leubsdorf's hypothetical, the judge estimated that the plaintiff had a forty percent chance of success at trial. Based on this probability, the judge assessed the potential harm to the plaintiff and the defendant at sixty dollars and sixty-four dollars, respectively. Therefore, it is apparent that the judge's estimate of the parties' probability of success on the merits militated in favor of granting an injunction.

This probabilistic assessment suffers from three major flaws. First, the assignation of a value to the probability component is crucial to the outcome of the injunction proceeding. This flaw is illustrated by the following table of values for Professor Leubsdorf's example:

<u>Defendant's Stake</u>	<u>Defendant's Probability of Success at Trial</u>	<u>Defendant's Potential Irreparable Loss</u>
\$100.00	60%	\$60.00
\$100.00	61%	\$61.00
\$100.00	62%	\$62.00
<u>Plaintiff's Stake</u>	<u>Plaintiff's Probability of Success at Trial</u>	<u>Plaintiff's Potential Irreparable Loss</u>
\$160.00	40%	\$64.00
\$160.00	39%	\$62.40
\$160.00	38%	\$60.80

Assuming a forty percent chance of success at trial, the plaintiff's irreparable loss exceeds the defendant's. Suppose, however,

130. *Id.* at 554 n.148.

131. *Id.*

that the judge estimated the plaintiff's chances of success at thirty-nine percent. Under Leubsdorf's calculations, the plaintiff's irreparable harm would exceed the defendant's by \$1.40. Should the judge grant the injunction? If one lowers the plaintiff's chance of success by one more percentage point, the defendant's loss exceeds the plaintiff's by \$1.20. Should the judge deny the motion? Clearly, this is a lot of silliness, but perhaps not. At a thirty-nine percent probability, the judge must make a marginal judgment call; only two percentage points separate different outcomes. The mathematics are very precise, but should a \$1.20 difference dictate an injunction? If judges must quantify the probability of success under the Posner formula, such questionable mathematical logic will prevail.

The second and more problematic flaw from which this probabilistic assessment suffers is the process by which the judge quantifies the probability. How does Professor Leubsdorf's judge arrive at a forty-percent value for the plaintiff's chance of success on the merits? Is not any such figure a "statistical myth," basically an intuitive guess by the judge? Despite the intuitive nature of this decision, however, Professor Leubsdorf considers this "[p]erhaps the most manageable part of the preliminary injunction decision."¹³² Leubsdorf suggests that the judge can base his estimation on affidavits, counsels' representations, inferences from a failure to produce accessible evidence, and "the judge's own notions about the plausibility of the parties' contentions."¹³³ "This process," states Professor Leubsdorf, "while far from ideal, is not outlandish. . . ."¹³⁴

In fact, this proposed process is outlandish because of the third major flaw in Professor Leubsdorf's approach—religious faith in the use of mathematical models, especially probability theory,¹³⁵ in the decisionmaking process. Professor Leubsdorf argues that "[j]udges as well as private decisionmakers often weigh alternative courses of action by considering the possible outcomes in light of their probability of occurrence."¹³⁶ Not surprisingly, Professor Leubsdorf supports his contention with Judge Learned Hand's

132. *Id.* at 555.

133. *Id.*

134. *Id.* at 555-56.

135. *Id.* at 543. "Such mathematical expectations of profit or loss are familiar tools in decisionmaking theory." *Id.*, citing R. CARNAP, LOGICAL FOUNDATIONS OF PROBABILITY 260-79 (2d ed. 1962); I. HACKING, THE EMERGENCE OF PROBABILITY: A PHILOSOPHICAL STUDY OF EARLY IDEAS ABOUT PROBABILITY, INDUCTION AND STATISTICAL INFERENCE 92-98 (1975); J. KEYNES, A TREATISE ON PROBABILITY 311 n.1 (1921).

136. Leubsdorf, *supra* note 14, at 543.

decision in *Carroll Towing* and Judge Posner's article on negligence formulas.¹³⁷ Thus doth the law feed on itself.

One reason civil procedure is so susceptible to quantification is that procedural motions are permeated with probabilistic assessments. For example, consider the threshold consideration for personal jurisdiction. The Supreme Court, in articulating the standard governing constitutionally permissible exercises of personal jurisdiction, has characterized the appropriate inquiry as whether "the defendant's conduct and connection with the forum state are such that he should reasonably anticipate being haled into court there."¹³⁸ In the calculus of personal jurisdiction, therefore, "reasonable anticipation" is the factor admitting of probabilistic assessment. Indeed, any procedural motion turning on questions of reasonableness or adequacy involves probabilistic calculations.¹³⁹

Are these probabilities assessable? Professor Posner thinks so, because he readily embraces statistical methodology:

An economic approach that explained 90 percent of some set of legal rules or outcomes would be judged strikingly successful by the standards of social science, but it would leave the legal practitioner with a hollow feeling if he had a case to which the unexplained 10 percent of the precedents were relevant.¹⁴⁰

Professor Posner errs by believing that economic analysis ever can explain ninety percent of litigation outcomes and that even ninety percent, if ascertainable, is adequate. Professor Posner, however, disparages those who worry about the inexplicable ten percent:

Perhaps this is why many legal scholars are suspicious of the application of economics to law. They feel that more is needed to explain 100 percent of the outcomes and that the whole 100 percent must be given some explanation, however flabby, lest the practitioner be caught with nothing to say when asked to interpret or distinguish a precedent arguably applicable to his case.¹⁴¹

Statistical applications in procedural contexts are woefully misplaced. Statistical probabilities work fine at the gaming table, where six faces of the die or fifty-two cards of the deck admit of recurring events, but it is impossible to conceive of a procedural context inviting such repetitive generalization, certainly not ninety percent. Every litigation is *sui generis*. The practicing attorney, therefore, is not misguided in demanding explanation for one hun-

137. *Id.* at 543 n.101. (Judge Posner's article is *A Theory of Negligence*, 1 J. LEGAL STUD. 29 (1972)).

138. *World-Wide Volkswagen Corp. v. Woodson*, 444 U.S. 286, 297 (1980).

139. *See, e.g.*, FED. R. CIV. P. 19(b) & 23(a), (b).

140. Posner, *Some Uses and Abuses*, *supra* note 36, at 302.

141. *Id.*

dred percent of cases. Explaining ninety percent of cases may have some scientific value or interest, but *deciding* ninety percent of cases correctly is different, indeed.

Although probability statistics are employed appropriately in certain substantive contexts—for example, actuarial assessments of damages in wrongful death actions¹⁴²—these calculations are highly inapt in evaluating a litigant's success on the merits. Statistical probabilities are valid because they are based on hundreds of repetitive events and outcomes. In litigation, however, no two events ever are the same; there are too many actors and variables to permit statistical generalization. Even assuming that hundreds of indigent injunction plaintiffs opposed administrative agencies, calculating those plaintiffs' probability of success would depend solely on one judge's experience with similar cases. Realistically, any particular judge's statistical sample would be far too small to generate a realistic value for probability.

c. *Implicit Subjectivity*

Although Professor Leubsdorf's model aspires to make the injunctive deliberation more precise, the model is littered annoyingly with implicit subjectivity. For instance, although Professor Leubsdorf concludes that his hypothesized plaintiff and defendant have one hundred sixty dollars and one hundred dollars at stake respectively, he is compelled to note that "[t]hese figures differ because the parties have different perspectives, just as in a free speech case the claimed right to distribute pamphlets may have a value different from the claimed right to prevent littering."¹⁴³ Herein lies a large tale, because the values assigned to rights by the litigants necessarily are permeated with subjective considerations. In Professor Leubsdorf's example, twenty dollars worth of groceries is worth a subjective thirty-two dollars to the plaintiff. Well, why not thirty-five dollars? At a thirty-five dollar value, assuming a thirty-eight percent chance of winning on the merits, the plaintiff should be granted an injunction—a result not mandated at a thirty-two dollar valuation. This simple example demonstrates that the values assigned to litigants' rights are manipulated easily and that a plaintiff desiring an injunction will succeed by placing a greater value on his or her alleged rights. In the extreme case, Professor Leubsdorf's formula permits the highest bidder to purchase

142. See, e.g., PROSSER & KEETON ON TORTS, *supra* note 112, § 127, at 949-50.

143. Leubsdorf, *supra* note 14, at 542 n.96.

an injunction, a result obnoxious to equity jurisdiction.¹⁴⁴

The point of this argument is not that subjectivity is evil. Rather, the point is that Professor Leubsdorf's model and Judge Posner's formula give the false impression that they eliminate subjectivity in the injunctive process. On the contrary, subjective elements exist throughout the process in assessments of rights, potential harms, real injuries, and probabilities of success. Imperfect as the traditional injunction standard is, it recognizes and accounts for these subjective valuations. The judge, sitting in equity, mediates these values and renders justice in a flexible manner. What the traditional process lacks in precision it makes up for in intellectual honesty.

The calculus of civil procedure is disingenuous because it diverts attention from the subjective elements of the decisionmaking process. Subjectivity, however, is not eliminated from the process. It merely is obscured in the complexities of algebraic babble. Litigants are not ciphers, and quantification of variables necessarily entails subjective valuation. As litigants become more savvy, procedural maneuvering will be transformed into a bidding contest. As the preliminary injunction formula clearly demonstrates, personal propensities simply will be channelled into pseudo-objective valuations.

A more problematic concern, however, is the task of judges. Judging, as we know it, necessarily is subjective; judges render decisions in conformity with precedent and rules, taking into account changed factual situations. If Judge Posner is correct, and procedure is reducible to a set of equations, then what is the judge's role? Perhaps judges could be dispensed with altogether. As long as judges are desirable, however, we should not be deluded concerning the nature of their function and the limitations of their abilities. Professor Michelman has captured this critique:

A related question, I believe, is: What does Posner mean when he says judges should be "cautioned" not to adopt economic discourse explicitly? If, as he suggests, wealth maximization is "the *only* value that a system of common law rulemaking can effectively promote," and if allowing judicial considera-

144. See *Roland Mach.*, 749 F.2d at 397 (Swygert, J., dissenting):

The interlocutory injunction developed in England in the courts of equity. Like other equitable remedies, injunctions were designed to offer relief when legal remedies were unavailable or inadequate to protect the parties' rights. Thus, it has been said that equity developed to relieve the harshness of the law. Despite the merger in our federal system of equity and law courts, a preliminary injunction is still considered an extraordinary remedy that is granted not as a matter of right.

Id. (citation omitted).

tion of other "justice" factors . . . would introduce an unacceptable degree of subjectivity and uncertainty into the judicial process," how are we not forced to insist that our judges both learn economics correctly and use it openly? One does not, presumably, want judges acting irresponsibly, unaccountably, vagrantly, capriciously, or in a muddle. If one also does not think "justice factors" (wealth maximization aside) can supply a coherent or intelligible discipline for judges, how does one avoid the conclusion that a judge is censurable for not mastering and correctly applying economic theory?¹⁴⁵

It is a difficult enough task to select federal judges who are competent in knowledge and understanding of the law. If Professor Posner's views prevail and Professor Michelman is correct, Congress will have the additional task of confirming judicial candidates schooled in both law and economics. Even then, any claimed analytical objectivity surely would not mask the subjective biases of both litigants and judges.

d. Illusory Objectivity

The problem of illusory objectivity is related closely to the problem of implicit subjectivity. After admitting that the parties to an injunctive proceeding have different perspectives, which give rise to different values, Professor Leubsdorf further concedes: "Ultimately, one party's view of the merits and the valuation consistent with it will prevail. In the meantime, the judge must consider each party's perspective."¹⁴⁶ This statement encapsulates the fundamental problem with Professor Leubsdorf's model—while it appears to embody objectivity, in reality, it disguises a large amount of subjectivity. Each party's valuations, as well as the judge's assessment of those valuations, are highly subjective. Professor Leubsdorf, in referring to the measurement of irreparable loss and the estimation of probable outcomes, concedes that "[c]ourts must resort to intuitive analysis in which the objective impact of the loss and its significance in light of relevant legal policies blend with some degree of personal judgment,"¹⁴⁷ but recognizes that "similar problems are overcome more or less crudely elsewhere in the law; judges balance incommensurable policies, and juries calculate damages for the loss of an arm without the help of a limb market."¹⁴⁸

Through his model, Professor Leubsdorf desires to eliminate

145. Michelman, *A Comment on Some Uses and Abuses of Economics in Law*, 46 U. CHI. L. REV. 307, 314 (1979) (footnote omitted).

146. Leubsdorf, *supra* note 14, at 542 n.96.

147. *Id.* at 554.

148. *Id.* at 554-55.

the "bromides" and "shibboleths" surrounding injunctive analysis and to encourage a correct decision.¹⁴⁹ Notwithstanding his model's appearance of objectivity, Professor Leubsdorf characterizes the basic judgments essential to an injunction decision as "estimates" and "predictions."¹⁵⁰ These characterizations are necessary because the objectivity he desires is unattainable. Indeed, in commenting on Professor Posner's efforts to quantify procedure, even Professor Leubsdorf recognized the limits of Posner's task, stating: "More elaborate analysis can improve the accuracy of preliminary adjudication, but only by making it more cumbersome and expensive."¹⁵¹

The central evil of illusory objectivity is that it conceals the true basis for decision and, therefore, increases the possibility of manipulation. Thus, the final objection to a calculus of civil procedure is simply that it is fraudulent. Formulas and calculations give the appearance of precise measurement, but, in reality, such objectivity is a mere chimera. Judges should not be clothing their decisions in an aura of objectivity when the truly objective is unattainable. Professor Tribe accurately articulated the inherent limitations in quantifying procedure:

[T]here may be at least some inherent limitations in the linking of mathematics to procedural rulemaking—limitations arising in part from the tendency of more readily quantifiable variables to dwarf those that are harder to measure, in part from the uneasy partnership of mathematical precision and certain important values, in part from the possible incompatibility of mathematics with open-ended and deliberately ill-defined formulations, and in part from the intrinsic difficulty of applying techniques of maximization to the rich fabric of ritual and to the selection of ends as opposed to the specification of means.¹⁵²

D. Judge Posner's Economic Analysis for Nonmarket Legal Transactions

1. A Digression on Insulating One's Self from Criticism

Professor Posner is a formidable opponent because he effectively disarms would-be challengers with caustic criticism. Those who may question Professor Posner's views are alleged to suffer from one or all of three intellectual shortcomings: (1) the inability

149. *Id.* at 545-46. "The danger of incorrect preliminary assessment is the key to the analysis of interlocutory relief." *Id.* at 541.

150. *See, e.g., id.* at 542-43, 549, 551 & 554-55.

151. *Id.* at 549 n.122 (citing Posner, *Legal Procedure and Judicial Administration*, *supra* note 8).

152. Tribe, *Trial by Mathematics: Precision and Ritual in the Legal Process*, 84 HARV. L. REV. 1329, 1393 (1971).

to distinguish normative from positivist analysis;¹⁵³ (2) the tendency to confuse normative economics with utilitarianism;¹⁵⁴ and (3) a simple lack of economic understanding.¹⁵⁵ Professor Posner's critics, therefore, fall into two camps: either economics dunderheads or fuzzy-headed sentimentalists. According to Professor Posner, his critics are variously ignorant, confused, or reductionist.¹⁵⁶ With those parries in store for the would-be challenger, it is not surprising that few confront Professor Posner.

Professor Posner's defenses, however, do not withstand scrutiny and certainly should not insulate him from criticism. For example, Professor Posner long has argued that his goal is purely positivist, rather than normative, and that his critics are unable to distinguish "between the use of economic analysis to argue for what should be and the use of economic analysis to explain what is or has been or to predict what will be."¹⁵⁷ Professor Posner would have his readers believe that his task, like Newtonian physics, is purely scientific:

I am personally less interested in normative economic analysis of law in any form than in positive economic analysis of law. "Positive analysis" refers, as I have suggested, to the attempt to understand and explain, rather than improve, the world. Explanation is the domain of science, and economics is the science of rational behavior. It should be possible to study behavior regulated by the legal system and even the behavior of the system itself through the methods of economics viewed as a science rather than as an ideology or ethical system.¹⁵⁸

Although logically appealing, Professor Posner's distinction between positive and normative economic analysis makes sense

153. Posner, *Some Uses and Abuses*, *supra* note 36, at 284-87.

154. See POSNER, *ECONOMICS OF JUSTICE*, *supra* note 7, at 48-87; Posner, *Utilitarianism, Economics, and Legal Theory*, 8 J. LEGAL STUD. 103 (1979).

155. See Posner, *Some Uses and Abuses*, *supra* note 36, at 297-306. "Judge Sneed's opinion in *Union Oil Co. v. Oppen*, [is] a good example of the adage, 'a little learning is a dangerous thing,' applied to economics . . . The court's discussion . . . evinces a misunderstanding of the applicable economics." *Id.* at 297-99 (footnotes omitted).

156. *Id.* at 297-306; Posner, *The Ethical Significance of Free Choice: A Reply to Professor West*, 99 HARV. L. REV. 1431 (1986).

157. Posner, *Some Uses and Abuses*, *supra* note 36, at 285. Professor Posner is piqued by woolly-head attorneys concerned with extraneous conceptions such as "the good":

Yet it is a distinction that lawyers have difficulty getting straight because they are inveterately normative, and it is a common source of confusion because many of the criticisms that are properly leveled at normative economic analysis are inapplicable to positive economic analysis. For example, that it may be hard to show that "efficient" is a synonym for "good" does not bear, at least directly, on the question whether the hypothesis that the common law is efficiency-promoting is supported by the evidence.

Id.

158. *Id.* at 287.

only if he is not interested in legal reform. Because he is interested in legal reform, however, this is a distinction without a difference. As a judge, Professor Posner now is able to transform his perception of "what is" into his view of "what ought to be." One should recall that Jeremy Bentham was a legal reformer first and foremost and an ethicist only incidentally. Judge Posner's task is the same, regardless of how he characterizes his analysis.

Professor Posner's attempts to disassociate his thinking from utilitarianism also fail.¹⁵⁹ While, on the one hand, he informs us that his economic analysis of the law is scientific, as opposed to ideological or ethical;¹⁶⁰ on the other, he tells us that his wealth maximization principle "provides a firmer basis for ethical theory than utilitarianism does."¹⁶¹ Perhaps Professor Posner is confused, or perhaps he cannot discern when the positive becomes normative. More likely, Professor Posner knows precisely what he is doing—promoting normative reformation under the guise of objective scientism.

Thus, Professor Posner has it both ways; he ambiguously waffles between roles as a scientist and an ethicist. Adding to this role confusion, he claims that critical ethicists are misguided because they do not understand economic analysis:

It is therefore not surprising that among the severest critics of the economic approach to law are those who attack it as a version of utilitarianism. Their procedure is to equate economics with utilitarianism and then attack utilitarianism. Whether they follow this procedure because they are more comfortable with the terminology of philosophy than with that of the social sciences or because they want to exploit the current philosophical hostility to utilitarianism is of no moment.¹⁶²

Professor Posner is equally contemptuous of academic lawyers who question social science applications to the law.¹⁶³ Clearly, in

159. See *supra* note 153.

160. See *supra* note 158.

161. POSNER, *ECONOMICS OF JUSTICE*, *supra* note 7, at 48.

162. *Id.* (footnotes omitted) (citing Epstein, *The Next Generation of Legal Scholarship?*, 30 STAN. L. REV. 635 (1978) and Epstein, *Nuisance Law: Corrective Justice and Its Utilitarian Constraints*, 8 J. LEGAL STUD. 49 (1979)).

163. Posner, *Some Uses and Abuses*, *supra* note 36, at 287-91. Posner sees his chief academic-lawyer critics as Grant Gilmore, the author of *The Ages of American Law* (1977), and Arthur Leff. Posner, *Some Uses and Abuses*, *supra*, at 287 n.25; see also Bloustein, *Privacy is Dear at Any Price: A Response to Professor Posner's Economic Theory*, 12 GA. L. REV. 429 (1978); Posner, *Some Uses and Abuses*, *supra*, at 301-06 (Professor Posner's response). For a challenge to Professor Posner's wealth-maximization framework from a humanities approach, see the recent exchange between Professors West and Posner in 99 HARV. L. REV. 1431, 1441 (1985). For further questioning of the economics approach, see also Tribe, *supra* note 63, at 592; Easterbrook, *supra* note 63, at 622 (Easterbrook's response) (as

Professor Posner's universe one is either an economics initiate or not: "economics is a distinct form of intellectual activity from philosophical utilitarianism; it has a technical vocabulary, theorems, and methodology of which a utilitarian philosopher might be—and many are in fact—unaware."¹⁶⁴ Professor Posner, therefore, entertains discourse only from fellow economists, most of whom, not surprisingly, agree with him. The law-and-economics coterie is remarkably incestuous and cannot tolerate interdisciplinary fools.¹⁶⁵ With the exception of Jeremy Bentham, it is difficult to recall such intellectual arrogance in the history of thought.

Professor Posner's insularity is particularly obnoxious because it does not allow for the possibility of intelligent discourse. His defense is basically tautological: Only those schooled in economics can understand his analysis, but anyone so schooled must be convinced of their soundness. Critics who question his premises or theoretical framework, therefore, are woefully misguided.¹⁶⁶ As Professor Posner himself admits, those who challenge his analysis must meet him on his ground: "A concrete demonstration of where and how the positive economic analysis of law fails would be more persuasive than the attempt . . . to dismiss the whole of social science."¹⁶⁷

indicated earlier, Professor Easterbrook is a fellow co-author and Judge on the Seventh Circuit with Judge Posner); Heller, *The Importance of Normative Decision-making: The Limitations of Legal Economics as a Basis For a Liberal Jurisprudence—As Illustrated By The Regulation of Vacation Home Development*, 1976 Wis. L. Rev. 385; Michelman, *supra* note 145; Tribe, *supra* note 152.

164. POSNER, *ECONOMICS OF JUSTICE*, *supra* note 7, at 49.

165. See, e.g., Posner, *Some Uses and Abuses*, *supra* note 36, at 301-06. Typical of Posner's approach: "Among his other economic errors, Professor Bloustein garbles the economic concept of scarcity." *Id.* at 305. On Judge Sneed's decision in *Union Oil Co. v. Oppen*, 501 F.2d 558 (9th Cir. 1974), Posner wrote: "But Judge Sneed's effort to articulate his reasoning in economic terms was disastrous." Posner, *Some Uses and Abuses*, *supra*, at 300. See generally *id.* at 297-306 (Posner's criticisms); Posner, *The Ethical Significance of Free Choice*, *supra* note 156.

166. Posner, *Some Uses and Abuses*, *supra* note 36, at 288.

The strategy of [the critics] is a curious one. Instead of analyzing the positive economic analysis of law on its merits—examining its theoretical consistency, its ability to explain data, and so forth—they address, necessarily in very general terms, the much larger question whether it is possible to treat *any* branch of human behavior in a scientific fashion.

Id.

167. *Id.*

2. From Professor to Judge—Transgressing the Normative Distinction

Judge Posner has crossed the great divide between the positive and the normative. He has, with his preliminary injunction formula, moved beyond mere academic debate to procedural reform by acting on his view of what the law ought to be. It is not unfair, then, to question the uses of social science methodology in legal settings. In the final analysis, however, Judge Posner can be met on his own terms because his positive economic analysis of the preliminary injunction decision fails both in theory and practical application.¹⁶⁸

During the last fifteen years, Judge Posner has devoted his energies to construing legal and social problems from an economics perspective, culminating in two major works: *An Economic Analysis of Law*¹⁶⁹ and *The Economics of Justice*.¹⁷⁰ As he explains, economic analysis of the law has two strands. The traditional branch is concerned with the legal ramifications of market transactions and includes the study of antitrust, taxation, corporations, utilities regulation, and international trade. The second branch addresses legal concepts regulating nonmarket activities. Pioneering works in nonmarket behavior include those of Professors Becker, Calabresi, and Coase.¹⁷¹ This second branch of economic application dominates Professor Posner's work. His basic hypothesis is that judges function to maximize economic welfare and that an economic structure is discoverable in legal rules, procedures, and outcomes.¹⁷² Consequently, the common law and legal doctrine "uncannily follows economics":

The hypothesis is not that the judges can or do duplicate the results of competitive markets, but that within the limits set by the costs of administering the legal system . . . common law adjudication brings the economic system closer to the results that would be produced by effective competition—a free market operating without significant externality, monopoly, or information problems.¹⁷³

168. See *supra* Part III(C)(2).

169. POSNER, *ECONOMIC ANALYSIS OF LAW*, *supra* note 6.

170. POSNER, *ECONOMICS OF JUSTICE*, *supra* note 7.

171. *Id.* at 1-9; see also Posner, *Some Uses and Abuses*, *supra* note 36, at 281-84.

172. See, e.g., Posner, *Some Uses and Abuses*, *supra* note 36, at 290-91 ("[N]umerous studies . . . have found a convergence, frequently subtle and unexpected, between the common-law rules and the implications of economic theory. . . . Nevertheless, it is striking . . . how wide a range of rules, outcomes, procedures, and institutions appear to support the efficiency hypothesis."). See generally POSNER, *ECONOMIC ANALYSIS OF LAW*, *supra* note 6, at 429-41; Posner, *Legal Procedure and Judicial Administration*, *supra* note 8.

173. POSNER, *ECONOMICS OF JUSTICE*, *supra* note 7, at 4-5.

Within this framework Professor Posner has analyzed almost every aspect of legal doctrine.¹⁷⁴ More recently, he has expanded his views to incorporate diverse aspects of social policy, including concepts of distributive justice, equality, constitutionalism, and the gamut of political and economic rights.¹⁷⁵ Needless to say, civil litigation has not escaped Professor Posner's scrutiny. For Professor Posner, "the goal of a procedural system, viewed economically, is to minimize the sum of two types of cost":¹⁷⁶ the cost of an erroneous judicial decision and the direct costs of the procedural system.¹⁷⁷ Hence, the aim of procedure is to promote economic efficiency, and Posner's formulation "enables systematic analysis of procedural issues characteristically debated in visceral rather than analytical terms."¹⁷⁸ Like Bentham and Learned Hand before him, Judge Posner despairs at vague conceptualizations such as "fairness." His economic approach permits legal questions "to be broken down into objectively analyzable, although not simple inquiries."¹⁷⁹ In Judge Posner's rational legal universe, therefore, the costs of error in civil litigation would be minimized through economic modelling—that is, a twentieth century Benthamization of the law.

IV. RESISTING THE BENTHAMIZATION OF CIVIL PROCEDURE

A. *The Camel's Head in the Tent: Crossing The Great Divide to Nonmarket Applications*

Professor Posner has a highly coherent view of the law, based on his construct of positive economic analysis. He repeatedly has praised the rational decisionmaking element of economic analysis

174. Posner's *ECONOMICS ANALYSIS OF LAW*, *supra* note 6, discusses legal application to market-related economic subjects, for example, antitrust, public utility and common carrier regulation, corporations and financial markets, and taxation. The book also roams afield to cover other nonmarket legal subjects including property, contracts, torts, family law, criminal law, distributive justice, civil and criminal procedure, administrative law, and constitutional law.

175. See generally POSNER, *ECONOMICS OF JUSTICE*, *supra* note 7 (applying economic analysis to nonmarket contexts such as retribution, punishment, pollution, privacy, defamation, discrimination and reverse discrimination); POSNER, *ECONOMIC ANALYSIS OF LAW*, *supra* note 6.

176. POSNER, *ECONOMIC ANALYSIS OF LAW*, *supra* note 6, at 429. Much of this analysis is developed more fully in Posner, *Legal Procedure and Judicial Administration*, *supra* note 8.

177. POSNER, *ECONOMIC ANALYSIS OF LAW*, *supra* note 6, at 429-33.

178. *Id.* at 430.

179. *Id.*

and argues that as long as "the economist can measure costs and that costs are relevant to policy, economics has an important role to play in debates over legal reform."¹⁸⁰ Additionally, Professor Posner has been at the forefront of broadening the interests of law-and-economics scholarship. Scarcely a legal problem has been untouched by Professor Posner's analysis, with policy implications for each issue. As judge, Posner predictably resurrected Judge Learned Hand's negligence formula and made it famous. What was not predictable, however, was that civil procedure would be Judge Posner's next target for Benthamizing the law.

In retrospect, we can see that procedural motions do provide the most likely arena for the imposition of Judge Posner's rationalization of the law. In a sense, Professor Posner realizes that procedure precedes substance and that social good is achievable by avoiding litigation, if possible. In Professor Posner's terms, "[j]udicial error is therefore a source of social costs and the reduction of error is a goal of the procedural system."¹⁸¹ "[L]egal procedure is conceived to be the minimization of the sum of two types of costs": error costs and direct costs.¹⁸² This formulation provides the structure for analysis of procedural problems and avoids the tendency of litigation issues to be drawn into "a purely visceral sense of fairness."¹⁸³

Professor Posner's error minimization framework permits mathematical assessment of an array of litigation issues. For example, he analyzes the mathematical condition for litigation as opposed to settlement.¹⁸⁴ He also has assayed the effects of specific procedures and rules on the probability of settlement, including court delay, prejudgment interest, pretrial discovery, liberal pleading requirements, and reimbursement of the winning party's attorney's fees.¹⁸⁵ The relationship between error costs and direct costs

180. Posner, *Some Uses and Abuses*, *supra* note 36, at 287.

181. Posner, *Legal Procedure and Judicial Administration*, *supra* note 8, at 401.

182. *Id.* at 399. See also *supra* note 176.

183. *Id.* at 401. This remark was made with reference to the analysis of whether a defendant in an administrative action should be entitled to a trial-type hearing, but Professor Posner's criticism or fear is applicable generally to most traditional legal analysis.

184. POSNER, *ECONOMIC ANALYSIS OF LAW*, *supra* note 6, at 434-41. As explained at page 436 of Posner's book *Economic Analysis of Law*, the condition for litigation may be formulated as:

$$P_p J - C + S > P_d J + C - S$$

which may be expressed equivalently as:

$$(P_p - P_d) J > 2(C - S)$$

185. *Id.* at 441-58.

supplies an analytical approach to jury abolition,¹⁸⁶ the efficacy of res judicata applications,¹⁸⁷ and burdens of proof and persuasion.¹⁸⁸ Other commentators, taking their cue from Professor Posner's work, have hypothesized economic rationales for the rules of standing.¹⁸⁹

In short, Judge Posner's preliminary injunction methodology is readily transferable to all civil procedure. The underlying economic rationale for the mathematical assessment of procedural motions—error minimization—is a laudable goal throughout litigation, and preliminary injunctions have no special claim on the realization of this goal. It is difficult to think of an aspect of the procedural process that is not susceptible to mathematical reduction. Jurisdiction, choice-of-law problems, pleading, Rule 12 motions, discovery, summary judgment, and trial problems such as burdens of production and persuasion, jury issues, and evidentiary rulings all lend themselves nicely to mathematical conceptualization. Post-trial procedures including res judicata and collateral estoppel also are amenable to mathematical formulation.

Judge Posner, in *American Hospital Supply*, took great care to stress that the preliminary injunction formula was not offered as a new standard, but merely as a shorthand method of denoting long-standing verbal criteria. This caveat is disingenuous. Professor Posner ardently desires to rationalize the law and reduce costs in the economic sense; he eschews any judicial judgment smacking of the "visceral." The preliminary injunction formula is not a passing novelty in procedural annals, and unless it is strongly reproved, we can expect more procedural formulas from Judge Posner.

B. Legitimizing Conclusions and Principled Decisionmaking

Professor Posner, in his varied writings on Jeremy Bentham, duly notes the two major criticisms of Bentham's philosophy: (1) the lack of any method to assess the felicific calculus; and (2) the "moral monstrosity" of certain utilitarian conclusions.¹⁹⁰ In discussing these problems, Professor Posner astutely concludes that the weaknesses of Bentham's analytical framework impelled results that amounted to little more than Bentham's own idiosyncratic

186. *Id.* at 457-58.

187. *Id.* at 454-55.

188. *Id.* at 433-34.

189. Scott, *Standing in the Supreme Court—A Functional Analysis*, 86 HARV. L. REV. 645 (1973), cited in POSNER, *ECONOMIC ANALYSIS OF LAW*, *supra* note 6, at 459.

190. See generally POSNER, *ECONOMICS OF JUSTICE*, *supra* note 7, at 52-58.

preferences and peeves. Professor Posner's observation is remarkable because of its obtusity; Posner fails to recognize that this critique applies to his methodology as well. Professor Posner's economic framework for nonmarket legal transactions fails for the same reasons that Bentham's felicific calculus failed; it simply is unworkable. Moreover, this criticism of Bentham's methodology is apt even apart from its moral content. The same is true for Professor Posner's work.

Professor Posner's economic analysis of nonmarket legal transactions is assailable for reasons that even he cannot deny. The entire thrust of Posner's critique centers on intellectual confusion and ignorance stemming from linguistic imprecision. What disturbs Professor Posner are the vague generalizations, the bromides, and the shibboleths of current legal standards. According to Professor Posner legal reform, therefore, is achievable through mathematical calculation and the elimination of visceral concepts such as justice or fairness. Professor Posner's proposed solution, however, merely adds a new layer of bromides on top of the old ones. The most charitable view of formula Posner is that he has taken a bad system and made it worse: he found subjectivity and hid it under obscurity; he found vague words and concealed them behind vague symbols; he found a standard that was difficult to understand and made it incomprehensible. Rather than simplifying and clarifying legal concepts, Judge Posner complicates legal procedure by reducing it to an inscrutable set of letters and numbers, punctuated by "greater than" and "less than" symbols. In Posner's brave new legal world, only economics initiates will comprehend the law.

Professor Posner is right in one respect. He repeatedly has pointed out that his critics do not understand economics and his work. This statement is absolutely correct and represents the single major defect in Professor Posner's views. If Judge Posner has his own way, he will transform the law into an esoteric science comprehensible to only a small, intellectual elite. The practicing bar, not to mention the lay public, would find legal proceedings inscrutable. The legitimacy of the law is in its ability to reach decisions and articulate reasoning in an understandable fashion. It is better to achieve an incorrect result arrived at by fair means clearly stated, than to achieve a mathematically correct result by a process no one, including the judge, truly understands. At least in the former case, one will know when an incorrect decision has been reached.

V. CONCLUSION

Judge Posner's criticisms of Jeremy Bentham are haunting in their applicability to himself:

Bentham never studied systematically any social or legal institution . . . contemporary or historical. He never tried to master the working principles of the institutions he sought to reform. Instead he deduced optimal institutions from the greatest-happiness principle and then tried to work out the details of their implementation. This is a mode of social research that breeds utopianism and its bitter cousin radicalism. Lacking an understanding of the real world to which his reforms must be fitted, the utopian reformer grows increasingly impatient at society's failure to implement his ideas and proposes increasingly radical measures to force a refractory world into his imagined mold.¹⁹¹

Judge Posner's most serious problem is that he lacks an understanding of the real world—legal and nonlegal—into which his reforms must fit. Judge Posner undoubtedly will continue to propound increasingly complex formulas in order to force a refractory legal world into his imagined economics mold.

Every now and again in history, a great man's death befits his life. This was true of Jeremy Bentham who, upon his death, left his body to science.¹⁹² We would do well to remember that the death of Jeremy Bentham liberated John Stuart Mill to reflect on the defects of the felicific calculus.¹⁹³ For those who labor in the legal profession, this provides some pause for thought. Perhaps, in the end, we all are either Benthamites or Millians.

A final word. Fifteen years ago, in a prescient article, Professor Tribe cautioned:

In an era when the power but not the wisdom of science is increasingly taken for granted, there has been a rapidly growing interest in the conjunction of mathematics and the trial process. The literature of legal praise for the progeny of such a wedding has been little short of lyrical. Surely the time has come for someone to suggest that the union would be more dangerous than fruitful.¹⁹⁴

Professor Tribe was right. It is time again to sound the alarm.

191. *Id.* at 40.

192. E. HALÉVY, *supra* note 4, at 479.

193. See J. PLAMENATZ, *THE ENGLISH UTILITARIANS* (1958); L. STEPHEN, *THE ENGLISH UTILITARIANS* (1900).

194. Tribe, *supra* note 152, at 1393.

