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The Expectation Measure and Its Discontents

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THE EXPECTATION MEASURE AND ITS DISCONTENTS

*Shawn J. Bayern & Melvin A. Eisenberg**

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INTRODUCTION

Under the indifference principle in contract law, the remedies for breach of contract should “leave the [promisee] absolutely indifferent, in subjective terms, between having the defendant breach and pay damages or having the defendant perform.”¹ This principle underlies the expectation-based remedies that are central to contract law—in particular, the expectation measure of damages, which serves as a surrogate for the “indifference principle.”²

Traditional economic analysis recognized that the expectation measure is supported by strong reasons of efficiency.³ Recently, however, some law-and-economists have criticized the expectation measure, and by implication the indifference principle, on instrumental grounds. The criticisms fall into two categories. Some critics argue that the goals of the indifference principle would be best served by modifying the expectation measure.⁴ Other critics argue that contract law should aim to achieve other goals entirely and then develop alternative economic models and remedial regimes based on

1. Richard Craswell, *Contract Remedies, Renegotiation, and the Theory of Efficient Breach*, 61 S. CAL. L. REV. 629, 636 (1988); see also Melvin A. Eisenberg, *Actual and Virtual Specific Performance, the Theory of Efficient Breach, and the Indifference Principle in Contract Law*, 93 CALIF. L. REV. 975, 979-80 (2005). For a variety of reasons, the expectation measure is an imperfect surrogate for the indifference principle, but for ease of exposition, we will use the two terms more or less interchangeably unless the context indicates otherwise. Also for ease of exposition, we will use the term *contract* in this Article to mean a bargain contract.

2. See Eisenberg, *supra* note 1, at 979-80.

3. See, e.g., RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW*, at 55-56 (1st ed. 1972).

4. See *infra* Part II.

those goals.⁵ Part I of this Article briefly summarizes the strengths of the indifference principle and the expectation measure. Parts II and III consider prominent alternative models and remedial regimes.

This Article has a substantive and a methodological aspect. The substantive aspect analyzes the validity of the alternative models and regimes apart from questions of administrability and institutional issues. The methodological aspect examines the administrability of these models and regimes and the congruence between the models and regimes, on the one hand, and institutional considerations, on the other.

I. THE INDIFFERENCE PRINCIPLE AND THE EXPECTATION MEASURE

In this Part, we briefly discuss the instrumental and noninstrumental strengths of the indifference principle and the expectation measure. The instrumental strengths consist of efficient incentives for performance and precaution and support for investment in surplus-enhancing reliance. The noninstrumental strength consists of the promotion of fairness between contracting parties.

A. Efficient Rate of Performance by Promisors

After a contract has been formed, events may give a promisor an incentive not to perform. For example, the promisor's cost of performance may increase significantly, or a new and more profitable opportunity may arise that is available to the promisor only if she breaches her contract with the promisee. Contracts are designed to enhance the wealth, or surplus, of the contracting parties. Accordingly, a decision to breach rather than to perform should account for the effect of the decision on the joint surplus that would result from performance. The expectation measure accomplishes this objective because it causes the promisor to consider not only the benefits of breach to her, but also the resulting costs and loss of benefits to the promisee. At least in theory, therefore, that measure efficiently sweeps the contract's entire value into the promisor's calculus of self-interest and thereby provides efficient incentives for a promisor's perform-or-breach decision.⁶

5. See *infra* Part III. Many of the alternative models and regimes are synthesized, elaborated, or developed in Richard Craswell, *Instrumental Theories of Compensation: A Survey*, 40 SAN DIEGO L. REV. 1135 (2003).

6. For a more formal introduction to the ways in which the expectation measure promotes efficient rates of performance, see ROBERT COOTER & THOMAS ULEN, *LAW & ECONOMICS* 247-49 (5th ed. 2008).

B. Efficient Rate of Precaution by Promisors

One reason that a promisor may breach is that the contract has become unprofitable to her because of some unwelcome event that increases her costs but does not constitute an excuse for nonperformance. Often the promisor could have forestalled this reason for breach if she had taken appropriate precautions against the occurrence of the relevant event.⁷ Precaution involves costs in the form of money, time, and effort. From an efficiency standpoint, however, these costs must be balanced against the resulting benefit—a reduction in the probability of breach, and a consequent enhancement of the likelihood that the potential joint surplus under the contract will be realized. The expectation measure provides an incentive for an efficient rate of precaution for the same reason that it provides an incentive for an efficient rate of performance.⁸ Incentives for precaution are efficient if they compel the promisor to balance the cost of precaution against the cost of failing to take precaution, including the cost of the increased risk to the promisee of losing his share of the prospective joint surplus. By placing that increased risk on the promisor, the risk will be swept “into the promisor’s calculus of self-interest in making decisions on” how much precaution to take.⁹

C. Surplus-Enhancing Reliance by Promisees

Once a contract has been made, a contracting party may take various actions in reliance upon it. Some of these actions are required by the contract, but others are within the party’s discretion. Discretionary reliance typically enables the promisee to increase the surplus that he will derive from the contract. Goetz and Scott developed this concept and called it beneficial reliance.¹⁰ An equivalent term is surplus-enhancing reliance. Here is an example: The Blue Angels, a rock group, contracts with Promoter to give a concert in three months. Promoter can greatly increase box-office receipts, and therefore the value of the contract, by advertising the concert in ad-

7. See generally Robert Cooter, *Unity in Tort, Contract, and Property: The Model of Precaution*, 73 CALIF. L. REV. 1 (1985) (comparing the incentives provided by expectation damages to take precautions against breach with incentives provided by tort law to take precautions against accidents).

8. Melvin A. Eisenberg & Brett H. McDonnell, *Expectation Damages and the Theory of Overreliance*, 54 HASTINGS L.J. 1335, 1336, 1361-62 (2003).

9. *Id.* at 1336.

10. Charles J. Goetz & Robert E. Scott, *Enforcing Promises: An Examination of the Basis of Contract*, 89 YALE L.J. 1261, 1266-67 (1980).

vance. Advertising therefore constitutes surplus-enhancing reliance.¹¹ A promisor may also benefit from the promisee's surplus-enhancing reliance because some of the projected enhanced surplus may be impounded into the price the promisee is willing to pay. In *The Blue Angels*, for example, Promoter may pay The Blue Angels a higher fee than he otherwise would if he can confidently spend money on advertising, which will increase his expected receipts and therefore his expected profits.

The expectation measure supports a promisee's investment in beneficial reliance. A promisee who knows that expectation damages give the promisor strong and appropriate incentives to perform, and to take appropriate precaution against breach, can be more confident that his investment in surplus-enhancing reliance is not subject to an undue risk of loss. The promisee therefore will be more willing to make the investment.

D. Fairness

Finally, there are strong reasons of fairness for a remedial regime based on the indifference principle. If *A* has rendered a bargained-for performance to *B*, we know that *A* was willing to render that performance to *B* for the agreed-upon price. We cannot know whether *A* would have rendered that performance to *B* for any lesser price. Requiring *A* to accept any lesser price would therefore unfairly convert *A* from a voluntary to an involuntary actor because if *A* had known in advance that the contract price was not enforceable in full, he might not have agreed and performed. Even where *A* has only partially performed, he may have done so because he expected full payment; and even where *A* has not yet begun to perform, he may have relied on the contract by forgoing or failing to explore other opportunities whose value is now difficult to quantify. In these cases, too, fairness normally requires that *A* be allowed to measure damages based on the price that induced him to act or forbear. In many or most cases, allowing a promisor to limit damages to less than the promisee's expectation would also have the same unfair quality as allowing a promisor to renege on a fair bet that he made and lost.¹²

* * *

In short, there are strong and widely accepted reasons for believing that the expectation measure provides promisors and promisees with incentives for efficient performance and precaution, and provides promisees with

11. For a more complete discussion of the implications of beneficial reliance on efficient damages, see Eisenberg & McDonnell, *supra* note 8, at 1340, from which this example is drawn.

12. See Eisenberg, *supra* note 1, at 980.

support for efficient investment in surplus-enhancing reliance. Within recent years, however, some law-and-economists have argued either that important revisions need to be made in the expectation measure to better attain these goals or that contract law should pursue other goals entirely. In Part II, we consider some of the former arguments; in Part III, some of the latter.

A major weakness of recent alternative remedial models and regimes is that they ignore noninstrumental considerations, and in particular, fairness. That having been said, in the balance of this Article we will consider the alternative damages models and regimes on their own instrumental terms because analyses based solely on those terms are sufficient to demonstrate that the models and regimes are gravely flawed.

II. CRITIQUES OF THE EXPECTATION MEASURE THAT AIM TO BETTER IMPLEMENT THE INDIFFERENCE PRINCIPLE

A. The Theory of Overreliance

One critique of the expectation measure that is basically designed to better implement the indifference principle, rather than to replace it, is the theory of overreliance. This theory is as follows:

- (i) If a promisor breaks a bargain contract, the promisee will ordinarily sue for expectation damages, not reliance damages; however, the promisee's lost profits, and therefore his expectation damages, may be higher if he has engaged in surplus-enhancing reliance.¹³
- (ii) There is always some probability that a promisor will breach.¹⁴
- (iii) The expectation measure fully insures a promisee against the promisor's breach.¹⁵
- (iv) This full insurance allows a promisee to ignore the probability that a promisor will breach, and therefore gives the promisee an incentive to invest in surplus-enhancing reliance at a level that is inefficient because it does not take that probability into account. To put this differently, the expectation measure may lead a promisee to inefficiently overrely; that is, to overinvest in surplus-enhancing reliance.¹⁶
- (v) In contrast, an efficient remedial regime would require a promisee to calibrate his investment in reliance according to the probability that the promisor will breach.¹⁷

13. Eisenberg & McDonnell, *supra* note 8, at 1338, 1341.

14. *Id.* at 1337.

15. *Id.* at 1338.

16. *Id.*

17. See Steven Shavell, *Damage Measures for Breach of Contract*, 11 BELL J. ECON. 466, 469-72 (1980); Steven Shavell, *The Design of Contracts and Remedies for Breach*, 99 Q.J. ECON. 121, 123-24 (1984) [hereinafter *Design of Contracts*].

The theory of overreliance was developed by Steven Shavell.¹⁸ It is a refinement of, rather than a counter to, the expectation measure. The theory is sound in principle, but when administrability and other institutional considerations are taken into account, the theory has a very limited ambit.¹⁹

1. Cases in Which Overreliance Is Impossible

To begin with, overreliance is often impossible. For example, expectation damages are often invariant to reliance. Where that is the case, an increase in the promisee's beneficial reliance will not increase his expectation damages, and the prospect of expectation damages therefore will not give the promisee an incentive to overrely. Take, for example, a seller's damages for a buyer's breach of a contract for the sale of goods. Sellers rarely suffer compensable consequential damages, because "[a] buyer's usual default is failure to pay. In normal circumstances, the disappointed seller [of goods] will be able to sell to another, borrow to replace the breaching buyer's promised payment, or otherwise adjust its affairs to avoid consequential loss."²⁰

Accordingly, in the case of a contract for the sale of goods, a seller normally cannot increase its consequential damages by overreliance. Moreover, a seller also normally cannot increase its *general* damages by overreliance. Three alternative formulas can be employed to calculate a seller's general damages for a buyer's breach of a contract for the sale of goods. One formula is the difference between the unpaid contract price and the market price at the time and place for tender.²¹ A second is the difference between the contract price and the price that the seller realizes on a resale to a third party that satisfies certain conditions.²² Under both these formulas, a seller cannot increase its recovery by investing in beneficial reliance, because contract price, market price, and resale price are all normally invariant to beneficial reliance. The third formula is the variable costs incurred by the seller prior to the buyer's breach plus the seller's expected profit as measured by the difference between the contract price and seller's total variable costs.²³ An increase in a seller's variable costs will increase the costs-

18. *Design of Contracts*, *supra* note 17, at 123-24.

19. The discussion of the theory of overreliance in this Section is an adaptation and revision of portions of Eisenberg & McDonnell, *supra* note 8, which includes a much more extensive critique of the theory. See also Aaron S. Edlin, *Cadillac Contracts and Up-Front Payments: Efficient Investment Under Expectation Damages*, 12 J.L. ECON. & ORG. 98, 98 (1996).

20. Eisenberg & McDonnell, *supra* note 8, at 1349-50 (quoting U.C.C. § 2-710 preliminary cmt. 2 (Proposed Amendments 2001)).

21. U.C.C. § 2-708(1) (2012).

22. § 2-706.

23. See § 2-708(2).

incurred element of this formula, but it will drive down the lost profit element by an equal amount, so that here too a seller's damages will normally be invariant to his beneficial reliance.

The analysis for a seller's damages in services contracts is very similar. Such damages can be calculated using several alternative formulas. One such formula is based on the variable costs incurred by the seller prior to the buyer's breach, plus the seller's expected profit as measured by the difference between the contract price and seller's total variable costs. An increase in a seller's variable costs will increase the costs-incurred element of this formula but will drive down the lost profit element by an equal amount, so that here too a seller's damages will normally be invariant to his beneficial reliance. An algebraically equivalent formula is the difference between the contract price and the variable costs remaining to be incurred by the seller at the time of breach.²⁴ As in the cases of contracts for the sale of goods, the contract price, market price, and resale price are invariant to the seller's reliance, and an increase in costs prior to breach will increase the costs-incurred element of the seller's recovery but decrease the profit element. Accordingly, the seller cannot overrely, for comparable reasons.

In short, under the damage formulas that are applicable to breach by a buyer of goods or services, the expectation measure normally cannot give a seller an incentive to overinvest in reliance. Accordingly, overreliance can almost never be a problem in the case of a breach by half of all contracting parties—that is, by buyers.

In the case of breach by *sellers* of goods or services, overreliance by a buyer is possible but often unlikely. Overreliance normally cannot increase the buyer's *general* damages because (as in the case of the seller's damages) those damages are measured by formulas that are invariant to the buyer's investment in beneficial reliance. One formula for measuring a buyer's general damages for breach by a seller is based on the difference between the contract price and the market price at the time when the buyer learned of the breach.²⁵ A second formula is based on the difference between the contract price and the cover price where the buyer covers.²⁶ A third formula, diminished-value damages, is based on the difference between the market value of the performance that the seller promised and the market value of the performance that the seller rendered.²⁷ A fourth formula, cost-of-completion

24. There are wrinkles in these general-damages formulas, which concern payments by the buyer prior to the breach. These wrinkles do not affect the present discussion and are omitted for ease of exposition.

25. *E.g.*, U.C.C. § 2-713.

26. U.C.C. § 2-711.

27. *E.g.*, RESTATEMENT (SECOND) OF CONTRACTS § 348(2)(a) (1981). As in the case of the seller's damages, there are wrinkles in the formulas, but they can be ignored for present purposes.

damages, is based on the amount required to put the seller's imperfect performance into the promised state.²⁸ Under any of these formulas, an increase in the buyer's investment in beneficial reliance normally will not increase the buyer's general damages, because normally contract price, market price, cover price, diminished value, and cost of completion are all invariant to the buyer's beneficial reliance. Accordingly, where a buyer can recover only general damages, as is often the case, he has no incentive to overrely.

2. *Cases in Which Overreliance, Although Possible, Is Very Unlikely to Occur*

Unlike a seller's general and consequential damages and a buyer's general damages, a buyer's consequential damages may be increased by investment in beneficial reliance. In practice, however, in many or most cases overreliance by a buyer is very unlikely to occur because even where a buyer's profits will vary with his investment in beneficial reliance, it would often be inefficient for the buyer to take the seller's probability of breach into account in determining how much beneficial reliance he should invest in. This is specifically true in cases involving lumpy reliance or coordinated contracts. It is more generally true because expectation damages do not perfectly insure promisees.

a. Lumpy Reliance

The theory of overreliance implicitly assumes that reliance expenditures are continuous. In the real world, however, these expenditures are often lumpy (that is, non-continuous). If a buyer's investment in surplus-enhancing reliance occurs in lumps that cannot feasibly be scaled down at the margin, it will usually be inefficient for the buyer to take the seller's probability of breach into account in determining the amount of his reliance. To illustrate, "[s]uppose Boatmaker agrees to build a commercial yacht—to be named *Seafarer*—for [Mariner], who plans to charter out the yacht for luxury cruises."²⁹ Mariner cannot charter out *Seafarer* unless the vessel is equipped with a customized radar and ten expensive high-tech life preservers, all of which Mariner, rather than Boatmaker, is responsible for.³⁰ Assume Mariner will earn a profit of \$30,000 per month from chartering *Seafarer*. The radar must be ordered two months in advance, and the life preservers must be ordered four weeks in advance. The probability that Boatmaker will breach is 10%. If Boatmaker breaches and Mariner must resell the radar and life preservers on the market, Mariner will take a loss of

28. E.g., RESTATEMENT (SECOND) OF CONTRACTS § 348(2)(b) (1981).

29. Eisenberg & McDonnell, *supra* note 8, at 1340.

30. This example is drawn from Eisenberg & McDonnell, *supra* note 8, at 1354.

\$6,000 on the radar and \$500 on the life preservers. On these facts, if Mariner does not order a radar until *Seafarer* is delivered, he will lose two months of profits, or \$60,000. Since Mariner cannot purchase 90% of a radar, he should order the radar in advance despite the 10% chance that Boatmaker will breach. Similarly, Mariner should order ten life preservers, despite the 10% chance that Boatmaker will breach, because nine life preservers will not do Mariner any good.

b. Coordinated Contracts

A similar problem arises where a buyer must enter into a number of coordinated contracts. In these cases it is normally inefficient for the buyer to enter into less than all the contracts even if there is a positive probability of breach for each contract. For example, suppose that to make a movie a producer needs to make contracts with a writer, a director, five actors, a cinematographer, a composer, and a film editor, and each artist has a 10% probability of breach.³¹ If production could not begin until all ten artists had signed contracts, it would be inefficient for the producer to make contracts with only nine artists.³²

c. Highly Limited Insurance

That overreliance can occur only in a very limited range of cases leaves the theory of overreliance unaffected in principle, although highly circumscribed in practice. But there is also a flaw in a central tenet of the theory: that the expectation measure fully insures a promisee's investment in reliance. It is this supposed feature of the expectation measure that is said to lead to overreliance. For example, Richard Craswell states that "[b]ecause the expectation measure guarantees [the promisee] *B* full compensation whether [the promisor] *S* performs or not . . . it means that *B* can ignore the risk that *S*'s nonperformance might leave *B*'s reliance expenditures wasted,"³³ and that "expectation damages allow *B* to capture all of the upside potential of his reliance without making him bear any of the downside potential."³⁴

If institutional factors are taken into account, however, the full-insurance tenet is incorrect. When a promisee determines how much to invest in beneficial reliance, he cannot rationally expect that his investment

31. *Id.* at 1355.

32. *Id.*

33. Richard Craswell, *Performance, Reliance, and One-Sided Information*, 18 J. LEGAL STUD. 365, 376-77 (1989) (emphasis added).

34. Richard Craswell, *Offer, Acceptance, and Efficient Reliance*, 48 STAN. L. REV. 481, 494 (1996).

will be fully insured by expectation damages.³⁵ What matters to a promisee is the expected present value of the damages he will receive in the actual world.³⁶ In determining that value, the promisee must discount his expected recovery for breach to reflect litigation risks and litigation costs.³⁷

Litigation *risks* include the risks of factfinding error by a judge or jury and the risk that the promisor may establish a legal defense that prevents the promisee from recovering all or part of his losses. Damages based on surplus-enhancing reliance entail high litigation risks because they

consist in whole or in part of lost profits, which are [always] difficult to measure and subject to [various] defenses, such as the principle of *Hadley v. Baxendale*³⁸ and the requirement of certainty. Moreover, because lost profits are unliquidated [in amount, there is a risk that even if the promisee prevails,] the court may not award [him] pre-judgment interest, so that the [present] value of a future recovery may also need to be discounted by the time value of money.³⁹

Given these and other litigation risks, in the case of surplus-enhancing reliance the expected value of actual-world expectation damages is unlikely to exceed 70-80% of a promisee's actual losses.

Litigation *costs* include attorney's fees and the opportunity costs of the promisee's time because the promisee must bear those costs even if he wins. Based on casual empiricism, the minimum legal fee for even a relatively straightforward commercial breach-of-contract case is often around \$10,000 to \$20,000, and the minimum fee for a complex high-value case is likely to range from \$50,000 to several hundred thousand dollars.⁴⁰

The promisee's litigation risks are a form of co-insurance because they require the promisee to bear the difference between his actual damages and the expected value of his damages.⁴¹ The promisee's litigation costs are a form of deductible because the promisee will have a net recovery only above and beyond those costs. "As Cooter points out, deductibles 'in effect divide liability between insured and insurer, giving the insured incentive to take more precaution than he would have otherwise.' The same is true of co-insurance."⁴² If the expectation measure is viewed as a form of insurance, it is subject to brutal co-insurance and deductibles. Far from being fully insured, therefore, a promisee who overrelies is likely to shoot himself in the foot. Indeed, given litigation risks and litigation costs, a prudent

35. Eisenberg & McDonnell, *supra* note 8, at 1357.

36. *Id.*

37. *Id.* at 1357-58.

38. *Hadley v. Baxendale*, (1864) 156 Eng. Rep. 145; 9 Ex. 341.

39. Eisenberg & McDonnell, *supra* note 8, at 1358 (footnote inserted) (footnote omitted).

40. *Id.* at 1359.

41. *Id.* at 1359-60.

42. *Id.* at 1358 (footnote omitted) (quoting Cooter, *supra* note 7, at 39).

promisee is more likely to underinvest in surplus-enhancing reliance than to overinvest.⁴³

3. *The Extreme Difficulty of Administering the Theory*

Finally, the theory of overreliance would be extremely difficult, if not impossible, to administer. For most practical purposes, the promisor is the only practicable source of information on the probability that she will breach any given contract, and the promisee will have little reliable information on which to base such a determination.⁴⁴ For the same reason, it will often be difficult, if not impossible, for a court to determine what the promisee's optimal level of reliance was and whether he relied to a greater extent than optimal. Moreover, even if the court is able to determine that the promisee had overrelied, and to what extent he had overrelied, the court would still "have to determine how much profit the promisee would have made if he had optimally relied."⁴⁵

* * *

43. We are indebted to Aaron Edlin for this observation.

44. Richard Craswell has proposed an ingenious rule to solve this problem: the promisor would be required to state the probability that he will breach, and the promisee would be entitled to base the amount of her reliance on that statement whether or not the statement was accurate. *See* Craswell, *supra* note 33, at 367-68. Under this rule, the actual probability of breach would be irrelevant; only the probability stated by promisor would count. *Id.* This rule, however, would present its own difficulties because even the promisor is unlikely to have a good fix on the probability that he will breach any given contract. Craswell suggests that this problem can be dealt with by employing a model in which a promisor will breach if his cost of performance will exceed the contract price plus the damages he would be required to pay if he breached. *Id.* However, at the time the contract is made a promisor will almost never know the amount of the promisee's damages upon breach. Typically, a promisee will not disclose to the promisor the amount of profits she expects to make. Furthermore, until breach actually occurs, the promisee often will not know how much his damages will be because circumstances often change between the time a contract is made and the time of breach. The promisor's costs of performance may also change during that time. Finally, Craswell's model of breach is incomplete because it does not take into account that in determining whether to breach the promisor will consider the effect of breach on her reputation. This element will also be difficult for either party to quantify, especially because the injury to the promisor's reputation will vary according to the circumstances of the breach, the injury caused by the breach, and the publicity given to the breach. The bottom line is that even under Craswell's model of breach, a promisor typically will not know, at the time the contract is made, the probability that he will breach. In short, at the time a contract is made, the promisor will not know her cost of performance, the damages she will be required to pay if she breaches, and whether her cost of performance will exceed the contract price plus those damages. Accordingly, a promisor's statement of that probability will normally be inaccurate. Because the social costs of overreliance (if any) depend on the actual probability of breach, not on the promisor's stated probability of breach, Craswell's model would not resolve the difficulty he addresses.

45. Eisenberg & McDonnell, *supra* note 8, at 1371.

In conclusion, the theory of overreliance posits that the “expectation measure provides inefficient incentives to a promisee because it insures the promisee’s reliance. In the absence of institutional considerations, the theory could have significant consequences in designing the law of contract damages. When institutional considerations are taken into account, however, the theory has virtually no consequences”:⁴⁶ (1) In most cases, overreliance normally either cannot or will not occur because, of the way in which the “expectation measure is instantiated in specific rules,”⁴⁷ the actual economics of contracting, or both; (2) expectation damages do not in fact insure the promisee’s reliance; and (3) in any event, the theory is not administrable by either contracting parties or courts.

B. Adjusting for Enforcement Errors

Economists have long recognized that without adjustments to conventional remedies, the law will be unable to cause wrongdoers to fully internalize the costs of their actions because not all victims successfully enforce their rights. Some victims do not know they have been wronged.⁴⁸ Other victims know they have been wronged but do not sue.⁴⁹ Others sue but fail to establish their meritorious claims in court or settle for less than the full value of their claims.⁵⁰

Cooter and Ulen call this the problem of *enforcement errors*.⁵¹ Economists have long suggested that for remedial regimes to be efficient, they must account for the possibility that wrongdoers know they might escape some or all liability due to such errors.⁵²

The general analysis of enforcement errors is commonly applied to tort and criminal law.⁵³ Economists’ traditional solution to the problem of enforcement errors in tort law is that damages should be increased by a percentage that will offset the wrongdoer’s chance of escaping full liability. For example, if tortfeasors are caught only 50% of the time, damages should

46. *Id.* at 1373-74.

47. *Id.* at 1374.

48. See William L.F. Felstiner, Richard L. Abel & Austin Sarat, *The Emergence and Transformation of Disputes: Naming, Blaming, Claiming . . .*, 15 LAW & SOC’Y REV. 631, 636 (1980).

49. See *id.*; Shawn J. Bayern, *Explaining the American Norm Against Litigation*, 93 CALIF. L. REV. 1697, 1697 (2005).

50. Contract plaintiffs have some reasons for settling, or not suing, that tort plaintiffs might not share. For example, a contract plaintiff might aim to make up his loss on the contract at issue in future dealings with his contracting partner, may write off an occasional loss as a cost of maintaining a relationship with that partner, and so forth.

51. COOTER & ULEN, *supra* note 6, at 396-97.

52. See *id.*

53. See, e.g., *id.* at 393-97 (explaining enforcement errors in tort law); *id.* at 493-99 (explaining enforcement errors in criminal law).

be doubled;⁵⁴ if they are caught only 25% of the time, damages should be quadrupled.⁵⁵

1. *Enforcement Errors in Contract Law and the Subjective Beliefs of Promisors*

Some law-and-economists have argued in favor of applying an enforcement-error analysis to contract law as well. For example, suppose a promisor can perform at a cost of \$500 and knows that her breach will cost the promisee \$1,000. Under the expectation measure, if there were no prospect of enforcement errors, the promisor would perform rather than breach because she would rather pay \$500 to perform than \$1,000 to remedy a breach. However, if the promisor expects that the probability she will be held liable is less than 50%, she would rather breach than perform—at least if she is selfish and the breach is not expected to result in other costs, such as litigation expenses or reputational damage. The prospect of enforcement errors therefore may appear to undermine the efficient incentives provided by the expectation measure, unless that probability is factored into damages.

As this example suggests, although arguments based on enforcement errors commonly rest on the probability of enforcement,⁵⁶ what matters fundamentally is the promisor's subjective beliefs about the probability of enforcement. It is these beliefs that motivate the promisor's perform-or-breach and precaution decisions. Subjective probabilities are individual probability estimates. If someone says that the probability that the Large Hadron Collider at CERN will destroy Switzerland is 1%, he says little more than that he would pay \$1 for a chance to win \$100 if that happens. He may believe his estimate is informed by data or carefully honed intuition, but for a subjective interpretation of probability, it need not be. At bottom, it is a personal guess. Ideally, therefore, a remedial regime in contract law that attempted to correct for enforcement errors would premise damages in large part on the promisor's state of mind. The central problem in taking enforcement errors into account in contract damages is that there is normally no reliable way to infer the promisor's state of mind concerning the probability of enforcement.

54. See, e.g., *id.* at 397.

55. See Richard Craswell, *Deterrence and Damages: The Multiplier Principle and Its Alternatives*, 97 MICH. L. REV. 2185, 2186 (1999).

56. E.g., *id.* at 2186 (referring to “the probability that any given violation will be punished”).

2. Objective Probabilities and Objective Evidence About Subjective Probabilities

It might seem that a solution to the problem of a court's inability, in the normal case, to determine a promisor's subjective belief concerning the probability of enforcement is to infer that belief on the basis of objective probability. This solution, however, would be highly problematic. One problem is that the odds are very low that a promisor can accurately predict the objective probability of enforcement. A related and even more significant problem is that even objective determinations of probability are extremely elusive in the case of one-off (single, non-repetitive) events.⁵⁷ To see why this is so, it will be helpful to briefly review and analyze several different theoretical interpretations of probability.⁵⁸

In some settings, probability statements can be understood objectively rather than subjectively; that is, they may be taken to be statements about the world rather than statements of an actor's belief about the world.⁵⁹ These kinds of probability statements are commonly presented in the context of theoretical games of chance,⁶⁰ in which probability statements represent almost definitional truths. For example, if we define a fair coin to be one for which heads and tails are equally likely when flipped, then the objective likelihood the coin will show heads after one particular flip is 50%.⁶¹ This is a statement about the coin and, therefore, about the objective world. Similarly, if we know that 5 of 100 students in a Columbia Law School contracts class graduated from Columbia College, we can say the odds of drawing the name of a Columbia College graduate at random from the contracts class roster is 5%. These statements about probability are just derivations from axioms; they are, for the most part, just alternative ways of stating what we

57. See, e.g., Matthew D. Adler, *Risk, Death and Harm: The Normative Foundations of Risk Regulation*, 87 MINN. L. REV. 1293, 1314 (2003) ("Because it is structured around general reference classes, general attributes, and relative frequencies, the frequentist account [of probability] is unable to attach a probability number to so-called 'singular' propositions absent some restructuring of such propositions in general terms.").

58. For an introduction to the notion of "interpreting" probability—that is, of trying to make sense out of the concept—see Alan Hájek, *Interpretations of Probability*, in STAN. ENCYCLOPEDIA PHIL. (Fall 2007 ed.), available at <http://plato.stanford.edu/archives/fall2007/entries/probability-interpret>.

59. As Colin Howson puts it in a helpful summary: "[T]he mathematical theory of probability seems to be a syntax with not one but two interpretations, one epistemic and the other objective, one relating to our knowledge of the world and the other to the world independently of our knowledge." Colin Howson, *Theories of Probability*, 46 BRIT. J. PHIL. SCI. 1, 1 (1995).

60. See Hájek, *supra* note 58.

61. See *id.*

already know. Under what is now called classical probability theory, probabilities are little or nothing more than these kind of axiomatic statements.⁶² Although objective views of probability are not limited to games of chance and similarly well-defined idealized situations, they run into difficulties as they move further away from those settings. Under the leading objective view of probability, known as frequentism, before estimating the probability of an event we need to construct a suitable reference class.⁶³ This prevents us from speaking of objective probabilities for one-off scenarios, like whether the Large Hadron Collider will destroy Switzerland. Richard von Mises, a leading expounder of frequentism, has given the following example: “[Frequentist probability] has nothing to do with questions such as: ‘Is there a probability of Germany being at some time in the future involved in a war with Liberia?’ . . . The implication of Germany in a war with the Republic of Liberia is not a situation which frequently repeats itself.”⁶⁴

The construction of appropriate reference classes—and the decision whether a reference class is appropriate—is a matter of judgment. For example, in discussing whether a suitable class of repeating events is available in a given type of case, von Mises includes dice and molecular systems, excludes a war between Germany and Liberia, and concludes that “the reliability and trustworthiness of witnesses and judges [is] a borderline case since we may feel reasonable doubt whether similar situations occur sufficiently frequently and uniformly for them to be considered as repetitive phenomena.”⁶⁵ It is important to recognize that in some cases, as a matter of judgment, decision makers may need to admit that relying on specific probability figures simply isn’t useful. Without an observed pattern or a theoretical justification for a pattern, it becomes difficult either to reach agreement on particular probability figures or to put probability figures into practice.

3. The Elusiveness of Objective Probabilities and Objective Evidence About Subjective Probabilities in Contract Cases

In some areas of law, such as many kinds of accident cases, it may well be productive to apply objective probabilities or to use objective evidence to infer subjective beliefs about probabilities. For example, if twice as many automobile accidents occur when automobiles are driven at speed X than at speed Y, it may make sense to say that the probability of an accident is twice as high at speed X than at speed Y—and perhaps it also makes sense to infer that certain actors should have beliefs that accord with that understanding. However, although a few kinds of breach of contract—such

62. *Cf. id.*

63. *Id.*

64. RICHARD VON MISES, *PROBABILITY, STATISTICS AND TRUTH* 9-10 (2d ed. 1981).

65. *Id.* at 10.

as a manufacturer's breach of a consumer warranty as a result of a product defect—might sensibly be analyzed by reference to large classes of events, in typical contracts cases the construction of a suitable reference class will be difficult or impossible.

For one thing, by the time a promisor enters into an agreement, she ordinarily knows the identity of the promisee, the history of the parties' negotiation, and other situation-specific facts. In most cases, there simply is no reasonable reference class to use because the individual characteristics of the transaction—the nature of the contract, amount, timing, negotiating history, personal relationships, locale, and so on—will swamp any general features of the case and frustrate attempts to generalize. Compare von Mises's example: Even though wars recur through history, a war between two particular countries without a history of war against each other is not the sort of repeating event about which we can say, "This event happens in X of every Y cases."⁶⁶ Accordingly, even if remedies can rest on objective probabilities (or on objective evidence about subjective probabilities) of enforcement in some areas of law, that means little for contract law, where singular and individualized injuries and enforcement are the norm.

Moreover, unlike crimes and many torts, breach of contract is typically a private affair, and as a result, relevant data would be difficult to gather in the first place. It may be relatively easy for a governmental agency, or even a private organization, to compile statistics about reported but unsolved crimes and then to compute an enforcement error. Similarly, many torts are publicly observed because, for example, the torts are crimes as well, or affect many individuals (like toxic torts),⁶⁷ or occur in public (like car accidents), or because insurance companies take notice of and assemble actuarial data on the torts. By contrast, breach of contract tends to fly under the public radar. If a promisor expects to avoid liability for breach, that is probably because she believes that the promisee will not detect the breach, will not be able to prove there was a breach, or will not have the resources to bring suit. Even if the promisee detects and establishes breach, except in small cohesive business communities, it is unlikely that the breach will be reported to any agency or private group interested in and capable of compiling accurate statistics.

66. There are other objective interpretations of probability, see Hájek, *supra* note 58, but they do not change our analysis in any important respect. For instance, there is a view known as *logical probability*, but it does not attempt to address one-off events more than do frequentism or classical probability theory. *Id.* There is also a view known as the *propensity interpretation*, which does aim to make theoretical objective sense of one-off events, but not in a way that makes objective probabilities more available for our purposes. (Propensity theory was developed to explain the probabilities of one-off events on the quantum-mechanical level. *See id.*)

67. *See* Craswell, *supra* note 55, at 2189.

In any event, the details of private contracts and the characteristics of contracting partners vary so widely that even if reliable statistics could be gathered concerning the likelihood of underenforcement of contracts as a whole, particular classes of contracts, or contracts made by a particular promisor, that data would be virtually unusable as applied to any given contract.

If there are no sensible ways to reach social or theoretical agreement about probabilities of enforcement in individual contracts cases, it is even less plausible to imagine that we can reliably infer an individual promisor's subjective beliefs about enforcement. Such an inference would not just be a guess; it would be a guess at a guess. To put this differently, even if there were a sensible objective probability to which the promisor should have personally subscribed, the existence of this probability does not imply that the promisor was able to discern it. Nor would it imply that a court, in setting damages, would be able to expect that the promisor would predict the court's level of damages, which would of course be necessary for remedies to affect the promisor's behavior.

4. *Other Administrative Concerns in Enhancing Contract Damages by Adjusting for Enforcement Errors*

As a result of these factors, estimates of the probability of enforcement errors in contract law are likely to be both highly speculative and highly inaccurate.⁶⁸ Richard Craswell, who is generally supportive of the recent work in remedial theory in contract law, nevertheless develops a penetrating litany of further, related administrative problems that would be raised by enforcement-error regimes:

As a result [of the administrative costs of an enforcement-error regime based on subjective estimates of probability,] recent economic analyses have . . . considered the use of multipliers that are the same for all defendants, rather than being figured separately on a case-by-case basis. Interestingly, if a constant multiplier is used, the most efficient multiplier will generally be less than the traditional multiplier would suggest, meaning that it will be less than one over the probability of punishment faced by the average wrongdoer. In some cases, the optimal multiplier could even be less than one, *meaning that damages should be reduced (rather than augmented)* in order to create efficient incentives in the presence of imperfect enforcement.⁶⁹

68. Cf. Omri Ben-Shahar & Lisa Bernstein, *The Secrecy Interest in Contract Law*, 109 YALE L.J. 1885, 1896 (2000) ("Unlike in the tort context . . . where actuarial tables make the award of a meaningful average measure of damages feasible, using an 'average expectation' measure in the contracts context would require courts to make factual determinations . . . that in most cases they are ill-equipped to make.").

69. Craswell, *supra* note 5, at 1168-69 (emphasis added).

Unfortunately (but perhaps realistically), these analyses also suggest that the exact size of the efficient multiplier will depend on a number of factors that are likely to be hard to measure.⁷⁰

In short, the analysis of efficient remedies is complicated enough even if we consider only two sets of consequences: (a) the deterrent effect on wrongdoers, together with (b) the effect on total enforcement costs. That is, even if we limit our attention to these two effects alone, the most efficient measure of damages could be either higher or lower than an exactly compensatory measure.⁷¹

In short, even if an economic understanding of enforcement errors is applicable in tort law or criminal law, achieving a coherent enforcement-error remedial regime in contract law is probably impossible, and such a regime would certainly be unadministrable.⁷²

C. Taking into Account the Secrecy Interest

In *The Secrecy Interest in Contract Law*, Omri Ben-Shahar and Lisa Bernstein identified and developed what they called the “secrecy interest” in contract law—that is, the interest of a promisee in not being required to reveal secret information as a condition to recovering damages in a suit for breach of contract.⁷³ For example, a promisee who wishes to establish a claim for lost profits may not want to reveal secret information about his suppliers or his costs. The central point of the article is that the rules of contract law and civil procedure fail to take the secrecy interest into account.⁷⁴ As a result, contract damages tend to be undercompensatory because the law’s failure to protect the secrecy interest may cause a promisee to forgo all or part of his claim.⁷⁵ Undercompensatory damages, in turn, will fail to provide incentives for the goals of achieving efficient performance, precaution, and surplus-enhancing reliance.⁷⁶ Ben-Shahar and Bernstein do not call into question those goals, the expectation measure, or the indifference principle. Rather, their aim is to bolster those goals, and bring the expectation measure into closer conformity with the indifference principle, by better

70. *Id.* at 1169.

71. *Id.* at 1170-71.

72. Moreover, contracting parties—unlike the parties in a typical tort case—have some opportunity to minimize in advance the importance of potential enforcement errors. If, for example, the danger is that breach will be unnoticed, the contract can call for an ongoing exchange of information among the parties. If the danger is that breach will not be verifiable to a court, the contract can include a definition of breach that courts can easily apply in a way that the parties can reliably predict. As a result, there may be reasons to believe that enforcement errors in contract law will be systematically less significant than in other areas of law.

73. *See* Ben-Shahar & Bernstein, *supra* note 68, at 1888.

74. *Id.* at 1889-90.

75. *Id.* at 1890-91.

76. *Id.* at 1893.

assuring that secrecy-sensitive promisees are indifferent between performance, on the one hand, and breach and damages, on the other.⁷⁷ Accordingly, they write “[w]ith a view toward refining, rather than challenging, the well-established literature on the economics of contract damages.”⁷⁸

The Secrecy Interest points to a real-life problem. However, Ben-Shahar and Bernstein fail to balance the costs of that problem against the costs of the solutions they propose.

To begin with, Ben-Shahar and Bernstein overweigh the secrecy interest. Observation suggests that promisees regularly sue for lost profits without a substantial concern about the information they must disclose by doing so. There are a number of reasons why this is so. Many types of damages depend on formulas whose elements are not secret, such as the difference between contract price and market price or the difference between the market value of a promised performance and the market value of the performance actually rendered. Next, under the principle of *Hadley v. Baxendale*⁷⁹ promisees must often disclose at the time a contract is made that if breach occurs they will incur lost profits of a certain type, thereby diminishing upfront the amount of information they would otherwise prefer to keep secret. Furthermore, some kinds of secret information can be shielded in litigation by a protective order. For example, in *In re Gabapentin Patent Litigation*, a patent-law suit, the court upheld a protective order that allowed a party to redact a supplier’s identity, among other secrets.⁸⁰ Similarly, in *CSU Holdings v. Xerox*, the court held that the defendant had not demonstrated that it needed to know the identities of twelve confidential suppliers.⁸¹ Finally, and perhaps most importantly, most secrets have a very short shelf-life, while litigation is interminable. Accordingly, even if there is secret information bearing on a contract, which has some value when the contract is made, the information is likely to have lost most or all of that value before litigation proceeds very far.

Just as Ben-Shahar and Bernstein overweigh the costs of the secrecy interest, they underweigh the costs of abolishing or drastically changing the doctrines they believe undermine that interest. Ben-Shahar and Bernstein critique a variety of remedial doctrines through the lens of the secrecy interest.⁸² Their critiques of cover and mitigation are paradigmatic. As to cover, they say:

In cases in which an aggrieved buyer has in fact covered, proving that she did so in an appropriate manner requires her to reveal a great deal of private information.

77. *Id.* at 1897-1901.

78. *Id.* at 1924.

79. *Hadley v. Baxendale*, (1864) 156 Eng. Rep. 145, 150; 9 Ex. 341, 353.

80. 312 F. Supp. 2d 653, 669 (D.N.J. 2004).

81. 162 F.R.D. 355, 358 (D. Kan. 1995).

82. *See* Ben-Shahar & Bernstein, *supra* note 68.

Establishing whether cover has taken place necessitates an inquiry into many of the transactions that the aggrieved party entered into immediately following breach. It may also require her to reveal sensitive business or market information, the identity of the next lowest cost supplier and the price at which he is willing to sell, as well as the identity and price charged by a large number of other market participants.⁸³

As to mitigation, they say: “A defendant attempting to establish that a plaintiff failed to mitigate her damages is permitted to take broad discovery of numerous documents and information that plaintiffs often have a substantial interest in keeping private.”⁸⁴ However, the costs of abolishing or drastically cutting back the doctrines of cover and mitigation would be very high. The duty to mitigate reduces social losses and, thereby, increases social welfare. Moreover, that duty is based not only on sound policy but also on morality. If the promisee can reduce damages at little or no cost to himself, he is morally obliged to do so. Similarly, cover is a central remedy in contract law because it serves as a kind of virtual specific performance.⁸⁵ As a remedy, cover has the look and feel of damages because the buyer ends up with a money judgment. As an act, however, cover yields many of the benefits of specific performance.⁸⁶ By covering, the buyer finds a replacement performance that, when put together with cover damages, is equivalent to what the buyer would have received if the seller had been ordered to specifically perform. Where cover can be achieved, it presents four substantial advantages over both market-price damages and actual specific performance.

First, because the buyer chooses the replacement performance himself, cover reflects the buyer’s subjective preferences. Therefore, cover avoids the shortfalls that often result when the buyer’s damages depend on a constructed market price that does not take the buyer’s subjective preferences into account. Second, in the case of a differentiated commodity, cover damages are often much easier to prove than market-price damages. In such cases, to prove market-price damages the buyer needs to locate and then extrapolate information from comparable transactions—a process the seller will inevitably contest. In contrast, if the buyer covers he may need to show only the cover price. Third, the act of cover normally prevents or minimizes the private and social costs of consequential losses. If a seller breaches a contract to supply an input or a factor of production, timely cover will prevent or minimize the buyer’s loss of profits as a result of the breach. Corre-

83. *Id.* at 1912 (footnote omitted).

84. *Id.* at 1913.

85. For further discussion of cover, see Eisenberg, *supra* note 1, at 1041-49.

86. *Cf.* Timothy J. Muris, *The Costs of Freely Granting Specific Performance*, 1982 DUKE L.J. 1053, 1055-56 (1982) (referring to “specific performance of [a] contract through the market”); Subha Narasimhan, *Modification: The Self-Help Specific Performance Remedy*, 97 YALE L.J. 61 (1987) (using the phrase “self-help specific performance,” although in a different context).

spondingly, timely cover will prevent or minimize the private cost to the buyer that results from the operation of the principle of *Hadley v. Baxendale*.⁸⁷ Finally, actual specific performance often involves problems concerning the enforcement process, mitigation, and the right to a jury trial.⁸⁸ Cover does not present these problems.

In contrast to the benefits of the principles of cover and mitigation, which are very high, the benefits of implementing the secrecy interest would be extremely low. For example, it is not clear why

[e]stablishing whether cover has taken place . . . may . . . require [an aggrieved buyer] to reveal sensitive business or market information, the identity of the next lowest cost supplier and the price at which he is willing to sell, as well as the identity and price charged by a large number of market participants.⁸⁹

As a practical matter, normally a buyer will put into evidence a purchase that he claims is cover, and the seller will then have the burden of coming forward with evidence showing either that the purchase was not really a replacement for the breached commodity or that the buyer overpaid. Furthermore, most of the information described by Ben-Shahar and Bernstein in connection with cover is not secret in any event. For example, it is highly unlikely that “the identity and price charged by a large number of other market participants” will be known only to the buyer.⁹⁰ Similarly, it is doubtful that a seller who wants to show that a plaintiff failed to mitigate damages has a broad right to discover secret documents and information. For example, the issue of mitigation arises most commonly in employment cases, and it is highly unlikely that a wrongfully discharged employee will have a trove of valuable relevant secret documents and information relating to his attempts to mitigate. Much the same will be true in other types of mitigation cases. Of course, there may be instances where a plaintiff will be required to reveal secret information in mitigation or cover cases—although even that is made unlikely by the short shelf life of secret information—but these instances will not be thick on the ground.

In short, the problem with the remedial regime proposed in *The Secrecy Interest* is not lack of administrability, but lack of soundness: the proposed regime would throw out the baby with the bathwater. Like the baby, the remedial doctrines that Ben-Shahar and Bernstein would eliminate or cut back are extremely valuable. Like the bathwater, in the typical case the secrecy interest has little or no value.

87. *Hadley v. Baxendale*, (1864) 156 Eng. Rep. 145, 150; 9 Ex. 341, 353.

88. *See Eisenberg, supra* note 1, at 1019-22.

89. Ben-Shahar & Bernstein, *supra* note 68, at 1912 (emphasis added) (footnote omitted).

90. *Id.* at 1912.

III. CRITIQUES OF THE EXPECTATION MEASURE THAT REST ON ALTERNATIVE GOALS FOR REMEDIAL REGIMES IN CONTRACT LAW

Part II discussed remedial regimes that shared the efficiency goals of the indifference principle and the expectation measure—efficient rates of performance and precautions, and facilitation of surplus-enhancing reliance—but entailed modifications of that measure to better satisfy the principle. In contrast, some law-and-economists have argued that remedial regimes should serve other goals entirely. In this Part, we consider several of these proposed regimes.

A. Remedial Regimes Whose Goal Is to Promote Efficient Search for Contracting Counterparties

One possible alternative goal for remedial regimes in contract law is to promote efficient search for contracting counterparties. Search entails costs, but if successful can be rewarding. In particular, the joint surplus produced by one pair of contracting parties may be larger than the joint surplus produced by another, and a party who wants to contract may need to search to locate the counterparty who will generate the highest joint surplus.

Peter Diamond and Eric Maskin have modeled the effects of remedial regimes on incentives to conduct efficient searches for contracting partners.⁹¹ Diamond and Maskin emphasize that an actor's decision to search for a contracting counterparty affects other searchers because that decision can influence the matches that other searchers can make.⁹² For example, if an actor decides to search for a condominium in Boca Raton, he gives prospective sellers in Boca a new opportunity to be matched with a buyer. More generally, a decision to search can either help or hurt other searchers. New high-quality searchers typically benefit potential counterparties. However, new low-quality searchers can have either positive or negative effects.⁹³ To simplify somewhat, new low-quality searchers can help existing searchers by making it easier for them to find *someone*, but can harm existing searchers by reducing the average quality of potential matches. Given a pre-set fixed expenditure on search, an existing searcher's best result is likely to be lower if the average quality of potential matches is reduced by the entrance of new low-quality searchers.

91. See generally Peter A. Diamond & Eric Maskin, *An Equilibrium Analysis of Search and Breach of Contract, I: Steady States*, 10 BELL J. ECON. 282 (1979) [hereinafter Diamond & Maskin I]; P.A. Diamond & Eric Maskin, *An Equilibrium Analysis of Search and Breach of Contract II. A Non-Steady State Example*, 25 J. ECON. THEORY 165 (1981).

92. Diamond & Maskin I, *supra* note 91, at 283-86.

93. See *id.* at 283-84.

Accordingly, one of Diamond and Maskin's central concerns is the positive or negative externalities that result from an actor's decision to search for contracting counterparties.⁹⁴ They argue that a remedial regime can give actors incentives either to search or not because the regime can affect both the value of contracts that may result from search (thereby making search potentially more or less valuable) and the cost of breaching an existing contract to make a new one.⁹⁵ That cost matters to Diamond and Maskin because in their model, even after an actor has entered into a contract she can and often will continue to search for a better counterparty.⁹⁶

This theory, however, does not easily translate into practice. As Diamond and Maskin point out:

[H]igher damages induce opposing effects on the incentives for . . . search . . . sometimes making comparisons with compensatory [that is, expectation] damages difficult. On the one hand, search is encouraged (relative to compensatory damages) by the greater return higher damages yield when breach [of the new contract] occurs. On the other hand, search is discouraged by the higher damages set [for breach under the old contract], which diminish opportunities for breach.⁹⁷

In other words, while it is conceivable that a remedial regime that is based on search, rather than on the indifference principle and the expectation measure, might provide a level of damages that provides better incentives for efficient search activity, Diamond and Maskin do not articulate such a regime. Indeed, as Craswell has pointed out, "[I]t is difficult to say whether the optimal measure of damages [for this purpose] would be either higher or lower than the expectation measure, for this may depend on the exact structure of the costs and potential returns to search."⁹⁸ Furthermore, even if an alternative remedial regime were successful at optimizing search activity, the regime would be likely to promote inefficient perform-or-breach decisions. As Diamond and Maskin state, "Damage rules affect both search and breach decisions. Only by happy coincidence could a single instrument induce the right decisions in both categories."⁹⁹ It is therefore not surprising that Diamond and Maskin conclude that no single formula for damages promotes efficient incentives for both breach and search.¹⁰⁰ If any-

94. *See id.*

95. *See id.* at 284-85.

96. *Cf.* Craswell, *supra* note 5, at 1164-65; Richard Craswell, *Offer, Acceptance, and Efficient Reliance*, 48 STAN. L. REV. 481, 500 (1996); Richard Craswell, *supra* note 1, at 649 n.43.

97. Diamond & Maskin I, *supra* note 91, at 284.

98. Craswell, *supra* note 5, at 1165. For Craswell's discussion of search externalities, which differs somewhat from that of Diamond and Maskin, see *id.* at 1164-65.

99. Diamond & Maskin I, *supra* note 91, at 299.

100. *See id.*

thing, they suggest, under some conditions “compensatory” (expectation) damages are probably more efficient than higher measures.¹⁰¹

Diamond and Maskin’s argument suffers from another problem. The argument implicitly builds on the theory of efficient breach because one of Diamond and Maskin’s major concerns is to allow parties who have already contracted to fluidly continue to search for better counterparties. For example, in describing a case of two original pairs of contracting parties in which one party in each pair breaches and the two breaching parties make a new contract with each other, Diamond and Maskin state that with compensatory (that, is expectation) damages, “the incentives for two breaching parties coincide with efficiency for all four original partners That is, the two [breaching] individuals find it in their interest to breach precisely when by so doing they increase the sum of the expected payoffs of these four partners.”¹⁰²

In practice, however, a breach by a promisor—as opposed to a mutually agreed-upon termination—almost never increases the payoff to the promisee as compared to the payoff from the performance, and on the contrary almost always decreases that payoff. To begin with, a promisor considering breach typically won’t know whether her gain from breach will exceed her promisee’s loss, and therefore is not in a position to determine the relative joint surplus from breach and performance.¹⁰³ More important, expectation damages never make promisees indifferent between breach and performance because, among other things, such damages—and most other types of damages—generally (1) rest on objective rather than subjective criteria; (2) are unavailable unless reasonably foreseeable at the time the contract is made and fairly certain at the time the contract is breached; (3) entail the loss of the time value of money; and (4) can be recovered only by incurring high legal fees that normally will not be included in the damage award.¹⁰⁴

Indeed, the theory of efficient breach is actually inefficient. One metric for measuring the efficiency of a contract rule is to ask what rule well-informed bargaining parties would agree upon if they were bargaining cost-free. The theory of efficient breach fails to satisfy this metric, and application of the theory would normally violate the implied terms of the parties’ contracts. For example:

101. See *id.* at 293. For purposes of discussion, Diamond and Maskin do at times provide formulas for these measures, but in the end, these formulas do not amount to specific alternative proposals. See *id.* at 288-92. Craswell has also proposed that the possibility of more general precontractual incentives ought to influence the damages awarded for breach of contract. Richard Craswell, *Precontractual Investigation as an Optimal Precaution Problem*, 17 J. LEGAL STUD. 401, 402 (1988). For similar reasons, however, the proposal would be almost impossible to apply, as Craswell recognizes. See *id.* at 426.

102. Diamond & Maskin I, *supra* note 91, at 284.

103. See Eisenberg, *supra* note 1, at 998, 1000.

104. See *id.* at 989-97.

Suppose that Seller and Buyer have negotiated a contract under which Seller agrees to sell a differentiated commodity to Buyer—say a home to live in, custom-made widgets that Buyer will use as an input in production, or a used die press that Buyer will employ as a factor of production. As the parties are about to sign a written contract, Seller says to Buyer, “In all honesty, I should tell you that although I have no present intention to breach this contract, neither do I have a present intention to perform. If a better offer comes along, I will take it and pay you expectation damages. In fact, I will begin actively looking for a better offer right after we sign this contract. Let’s insert a provision that recognizes I will do just that.” What would be Buyer’s likely response? Under the theory of efficient breach, Buyer would say, “Of course, I expect no more.” Experience strongly suggests, however, that in real life, most buyers would be surprised if not shocked by such a statement and would either walk away; insist on an explicit contractual provision stating that the seller has a present intent to perform and that any profit on breach and resale will go to buyer; or demand a payment, in the form of a lower price, for the seller’s right to resell.¹⁰⁵

Accordingly, if it is assumed that contracts between well-informed parties are efficient, that a contract includes implied as well as express terms, and that well-informed parties would have refused to permit each other to search for overbidders unless a premium was paid for the right to do so, then it is implied in nearly every contract that the seller will not continue to search unless the contract explicitly authorizes her to do so. Consequently, the theory of efficient breach inefficiently remakes the parties’ contract. (Why then don’t contracts explicitly provide that the promisor can’t continue searching for a new contract partner? For the same reason that parents don’t tell babysitters not to have sex with the children. The point is so obvious that no one would think of explicitly addressing it.)

B. Remedial Regimes Whose Goal Is to Eliminate Adverse Selection and Other Effects of Inefficient Pricing

A well-known issue in tort law is the problem of activity levels. Simply put, if an activity forces others to incur some cost, such as physical injuries, then the activity can occur more often than is efficient even if it is conducted carefully. As Steven Shavell puts it, even an injurer who must pay damages when he acts negligently may “not be motivated to consider the effect on accident[al] losses of his choice of whether to engage in his activity or, more generally, of the level at which to engage in his activity.”¹⁰⁶ Similarly, from society’s perspective, victims who are fully compensated for

105. *Id.* at 1006-07.

106. Steven Shavell, *Strict Liability Versus Negligence*, 9 J. LEGAL STUD. 1, 2 (1980) (emphasis omitted).

injuries that result from their own activity may engage in the activity too often.¹⁰⁷

This analysis of activity levels in tort law doesn't carry over to contract law directly. It would make little or no sense to say there are too many contracts.¹⁰⁸ However, the analysis related to activity levels has suggested to some that in a contractual setting the expectation measure can give rise to two related problems, known as cross-subsidization and adverse selection.¹⁰⁹ As Craswell notes:

[I]n many contexts users differ [from one another] in the expected damages that a . . . breach would inflict. For example, if a defective toaster [that is, under warranty] causes a fire, the consequential damages will be greater for users with expensive homes and furnishings than they will be for users with modest, working class homes.¹¹⁰

However, the argument goes, a manufacturer will normally charge all customers the same price—a price that impounds the average damages he will be obliged to pay.¹¹¹ This in turn will lead to two problems. First, customers for whom the expected loss is low (for example, those with modest homes) will be subsidizing customers for whom the expected loss is high (for example, those with expensive homes).¹¹² This is the problem known as cross-subsidization. Second, because of cross-subsidization the price to low-expected-loss customers will be higher than it would be if no customers carried a high-expected risk.¹¹³ As a result, these customers may be inefficiently discouraged from purchasing the good or service. This is the problem known as adverse selection.¹¹⁴ Cross-subsidization by itself only transfers wealth; it does not cause a net social loss. However, a net social loss *does* arise when cross-subsidization leads to adverse selection.¹¹⁵ In short, as with other activity-level arguments, the concern is that some actors will

107. See Craswell, *supra* note 5, at 1157; Shavell, *supra* note 106, at 17-20. Of course, in cases of physical injuries—and in other situations where compensation is imperfect—victims tend to have very strong incentives anyway to avoid being injured.

108. When contracts harm third parties, it can make sense to say there are too many of them. But such contracts normally ought to be either prohibited (like contracts to commit a crime) or addressed by tort law (like contracts to engage in an activity that increases the risk of accidents for third-party victims).

109. See Craswell, *supra* note 5, at 1158-59.

110. *Id.* at 1158.

111. *Id.* at 1159.

112. *Id.*

113. *Id.*

114. *Id.*

115. As Craswell notes, cross-subsidization is still problematic because it is likely to be unfair, particularly because it tends to transfer wealth from richer promisees to poorer promisees. *Id.* at 1159. However, this unfairness—to the extent it exists—needs to be compared against the unfairness of remedial regimes that do not adhere to the indifference principle.

choose inefficient levels of some contractual activities (like purchasing toasters) because the injuries that result from those activities are subsidized by others (those with less to lose if the toaster burns down their house). Craswell puts it as follows:

[F]rom the standpoint of efficient activity levels, the subsidy could produce “adverse selection,” meaning that riskier customers (those who benefit from the subsidy) will use the product excessively, while less risky customers (those who have to pay the subsidy) will use it too little. In the extreme case, the less risky customers might even be priced out of the market entirely, leaving only the highest-risk customers to purchase the product.¹¹⁶

As in the case of other critiques of the expectation measure, these problems are unlikely to occur in practice, and even if they were likely to occur, no workable alternative to expectation damages would cure the problems.

1. *Contractual Mechanisms to Avoid Cross-Subsidization and Adverse Selection*

Cross-subsidization and adverse selection arise when sellers cannot differentiate among buyers—that is, when they cannot charge each buyer a price that corresponds to that buyer’s expected compensable loss.¹¹⁷ However, both contract doctrine and common business arrangements let sellers differentiate among buyers at little cost. For example, the principle of *Hadley v. Baxendale* allows a promisee to recover only those damages that were reasonably foreseeable to the promisor in advance.¹¹⁸ Because of the *Hadley* principle, either a seller will not be liable for a buyer’s abnormally high loss from breach, or the seller will have information about the prospective loss, in which case the seller can increase the price accordingly, decline to deal with the buyer, or contractually limit the buyer’s damages. It is therefore likely that “all users of the good or service are identical”¹¹⁹—or at least substantially similar—with respect to the amount of damages the seller will expect to pay in the event of a loss. Moreover, sellers can, at small cost, either limit their own liability for consequential damages or provide a menu of liability options and linked prices from which buyers can select the level of liability they desire.¹²⁰ Thus, a shipping company might allow buyers to purchase different levels of “insurance” for packages, and each buyer can select a level that corresponds to the loss he expects.

116. *Id.* (footnote omitted).

117. *See id.* at 1158-59.

118. *Hadley v. Baxendale*, (1864) 156 Eng. Rep. 145, 147-48; 9 Ex. 341, 345-46.

119. Craswell, *supra* note 5, at 1158.

120. Melvin Aron Eisenberg, *The Principle of Hadley v. Baxendale*, 80 CALIF. L. REV. 563, 606-08 (1992).

2. *Implications for the Indifference Principle and the Expectation Measure*

Even if cross-subsidization were likely to pose a problem, it is unclear what to do about it. Craswell proposes no alternative to expectation damages to address the problem, and it is unlikely that a workable alternative is available. This is not surprising, because adverse selection does not result from the expectation measure. Rather, it occurs whenever courts compensate individual buyers at different levels in cases where sellers cannot discriminate among customers by predicting these levels and pricing accordingly.

One candidate for responding to the problems of cross-subsidization and adverse selection would be to award any given injured promisee only the level of damages suffered by *all* of the promisor's injured promisees.¹²¹ We will call this the least-common-denominator measure. This measure is highly problematic. First, if least-common-denominator damages are nothing or next to nothing because some promisees were almost entirely uninjured by the breach, courts would award nothing or next to nothing to those promisees—perhaps the great majority—who were injured. Second, a court that wanted to impose least-common-denominator damages would need to determine those damages by surveying the entire class of injured promisees—and do so whenever a new case arose, since the population of injured promisees will fluctuate over time. Courts are completely unequipped to make such determinations.

There is a broader problem with attempts to respond to adverse selection by proposing an alternative remedy for breach. Adverse selection can be interpreted as merely a cost that arises from the seller's lack of information about individual buyers. Changing the remedy for breach does not eliminate this cost; it merely pretends to avoid the cost by shifting it elsewhere—for example, by leading a buyer who wants compensation for breach to obtain first-party insurance, in which case the adverse-selection problem will resurface between the buyer and his insurer.

121. This solution is tentatively proposed by Gwyn D. Quillen, Note, *Contract Damages and Cross-Subsidization*, 61 S. CAL. L. REV. 1125, 1140-41 (1988) (“To avoid [cross-subsidization], buyers should be allowed to recover only those damages that all buyers, either high or low risk, will suffer due to the seller's breach. Where this principle conflicts with other goals of remedies for breach of contract, such as inducing the seller to take the optimal precautions against breach, the problem of cross-subsidization should be weighed against the problems recovery is intended to address, and the appropriate remedy chosen on a case-by-case basis. Tests such as ‘foreseeability,’ ‘tacit agreement,’ and the ‘necessity of preventing injustice’ may allow courts to do just that.”).

C. Efficient Mitigation After Breach

Law-and-economics scholars have long noted what Robert Cooter has called the “paradox of compensation”: when a wrongdoer internalizes the full cost of her wrongs, her victims may have diminished incentives or even no incentives to take precaution against these wrongs.¹²² Applying this idea in a contractual setting, Craswell suggests that under a remedial regime that implements the indifference principle, a promisee may “run up . . . damages needlessly by continuing to perform after the other party has already announced its breach.”¹²³

However, such a failure to mitigate is extremely unlikely. Even under a regime that implements the indifference principle perfectly and thereby causes promisees to be completely indifferent between performance and breach, a promisee has no incentive to “run up . . . damages needlessly”¹²⁴ for their own sake, simply to be reimbursed for them later. Unless the promisee is irrationally spiteful, the only reason he might wish to avoid mitigating his damages is that mitigation may carry some cost. Often, however, mitigation has no cost. For instance, in *Rockingham County v. Luten Bridge Co.*, a bridge company entered into an agreement with a county to build a bridge.¹²⁵ The county later decided that it did not want the bridge, instructed the bridge company not to proceed any further with the bridge, and canceled construction of a road that was to lead to the bridge.¹²⁶ Because the county did not want the bridge, and the bridge was useless without the road, further construction of the bridge represented a pure social loss. Moreover, this loss was not reduced by any significant private gain to the bridge company that would result from the continuation of construction. The company would have been just as well off if it stopped work and sued for damages as it would have been if it finished the bridge and was awarded the full contract price.¹²⁷

Even when mitigation does have a cost, the cost is likely to be low because contract law does not require parties to undertake mitigation when it is unduly costly or risky.¹²⁸ Moreover, because compensation for harm is

122. Cooter, *supra* note 7, at 3-12.

123. Craswell, *supra* note 5, at 1153-54.

124. *Id.*

125. 35 F.2d 301, 302 (4th Cir. 1929).

126. *Id.* at 303.

127. *See id.* One possible gain to the bridge company from completing construction would be an addition to the portfolio it could show to prospective customers. However, such a gain is too uncertain and insignificant to excuse a contractor who continues to work after a countermand.

128. *See, e.g., Bank One, Tex., N.A. v. Taylor*, 970 F.2d 16, 29 (5th Cir. 1992) (quoting *City of San Antonio v. Guidry*, 801 S.W.2d 142, 151 (Tex. Ct. App. 1990)) (noting that

never certain, and even expectation damages normally do not fully satisfy the indifference principle,¹²⁹ in the real world promisees have little incentive to run up damages needlessly by incurring costs, since they would run a significant risk that they would not recover some or even any of the costs.

Furthermore, it is a basic principle of contract law that a promisee who does not take reasonable steps to mitigate will be unable to recover the losses that result from his failure to mitigate.¹³⁰ Therefore, promisees who do not mitigate when it is inexpensive and not risky to do so will lose some or even all of their damages.

Craswell argues, however, that the doctrine of mitigation may be inefficient because it involves:

Extra administrative costs, by requiring courts to evaluate the victim's behavior. [It] may also introduce additional uncertainty, and additional risk of judicial error, by leaving it to courts to decide what kind of behavior is "reasonable." For these reasons, it may sometimes be easier to influence victims' incentives by reducing the damages paid to *all* victims.¹³¹

Accordingly, Craswell suggests that it might be more efficient to remove the duty to mitigate and instead to lower the promisees' damages systematically in order to recapture the efficient incentives of the duty to mitigate.¹³²

However, Craswell does no more than raise the possibility that a systematic reduction in damages would be less costly than a determination about a party's failure to mitigate. He gives no reason to suppose this would actually be the case, and it is highly unlikely that it would be. What would such a reduction look like? Would there be one standard reduction for all plaintiffs or varying reductions depending on the type of claim? Would the reduction be reassessed annually? And how would such a reduction be accomplished? If a reduction were to be accomplished judicially, would the reduction in one case be the rule for all cases in the same jurisdiction, or would the courts need to determine the reduction case by case? If the reduction were to be accomplished case by case, it would certainly be much more costly than a determination of whether the plaintiff had exercised reasonable efforts to mitigate. If the reduction for all cases were to be accomplished in one fell swoop, it would require a kind of inquiry for which courts are ill suited.

the promisee is "required to incur 'only slight expense and reasonable effort' in mitigating his damages").

129. See Eisenberg, *supra* note 1, at 989-97 (explaining the shortfall between expectation damages and the indifference principle as a result of the way damages are computed in practice, rules that foreclose uncertain and unforeseeable damages, and other factors).

130. See generally Charles J. Goetz & Robert E. Scott, *The Mitigation Principle: Toward a General Theory of Contractual Obligations*, 69 VA. L. REV. 967, 967-69 (1983).

131. Craswell, *supra* note 5, at 1154.

132. *Id.* at 1153-54.

Courts are accustomed to and capable of making retail determinations of reasonableness and fault, and a judgment about mitigation is no harder to reach than any other judgment a court makes about these issues. In contrast, courts are unaccustomed to and incapable of making the sort of wholesale determinations Craswell seems to suggest. Such a reduction could be accomplished by statute, but the legislature would then be entering an arena that, generally speaking, has been regarded as better suited to the courts. In either event, consider the massive amount of forum shopping that would follow if some states went Craswell's route and others did not, or if all states went Craswell's route but adopted different reductions. Of course, that problem could be avoided by a federal statute, but the prospect of congressional action on an issue like this is not too appealing.

Furthermore, Craswell's argument about adverse selection is inconsistent with his conclusion here. Craswell argues that a systematic reduction in the damages available to promisees would serve as a kind of "strict liability on [promisees], making [them] bear the loss whether or not they have behaved reasonably."¹³³ Because of adverse selection, however, this sort of strict liability would be inefficient: if damages for all promisees are systematically reduced, promisees who took reasonable steps to mitigate damages would subsidize those who didn't. As a result, many or most promisees could be discouraged from mitigating, leading to increasingly inefficient levels of mitigation.

D. A Remedial Regime Based on Expected-Wealth Effects

Still another alternative model, also proposed by Craswell, is based on the premise that efficient precaution is achieved only when the promisor takes into account the subjective value that the promisee places on incremental increases in precaution by the promisor, and the consequent decreases in the risk of breach:

Insofar as we are concerned with the wrongdoer's incentive to take precautions, the efficient level of damages cannot necessarily be derived from the value that victims place on the entire loss they would suffer, as if they were being asked to accept that loss with certainty. Instead, the efficient level of damages should be determined by first finding the value that victims place on the specific reduction in risk that is under consideration—since this is all the difference those precautions will actually *make* to the victims—and then working backwards from that value to come up with the damage measure that gives the manufacturer the correct incentives.¹³⁴

We will call this the expected-wealth model.

133. *Id.* at 1154.

134. *Id.* at 1162.

To make the argument more concrete, consider the following example, which is based in part on an example that Craswell formulated.¹³⁵ Suppose that a manufacturer produces machines, and every buyer expects to suffer a \$10,000 loss if the manufacturer fails to deliver the machine. If a buyer is rational and risk neutral, he will value all 1% reductions in the risk of delivery failure—say, from 25% to 24% or from 2% to 1%—at \$100 (1% of \$10,000). However, Craswell observes, if a buyer experiences diminishing marginal utility of wealth and therefore risk aversion,¹³⁶ a decline in the risk of breach from 25% to 24% should be more valuable to him than a decline from 2% to 1%, because he will have greater expected wealth from the contract when he faces only a 2% risk of breach (and therefore a 98% likelihood of performance) than when he faces a 25% risk of breach (and therefore only a 75% likelihood of performance). While a risk neutral buyer would value all these reductions in risk at \$100, a risk-averse buyer might value some of them differently.

So, for example, imagine that because of diminishing marginal utility, a buyer values a reduction in risk from 25% to 24% at \$105 instead of \$100. Then following Craswell's argument, if the aim of expectation damages is to give the promisor efficient incentives to take precaution, damages for breach should be \$10,500, rather than the \$10,000 that expectation damages would provide. The reason is that if damages were set at \$10,500, the manufacturer would have the proper incentive to spend \$105 on a given precaution: investment in the precaution has an expected payoff to the manufacturer of \$105 because it reduces by 1% the likelihood of its having to pay \$10,500 in damages. In contrast, damages of \$10,000 give the manufacturer an incentive to spend only \$100 per machine on the precaution. Therefore, it

135. *Id.* at 1160-62.

136. The connection between risk aversion and wealth has to do with economists' definition of "risk aversion." One ordinarily thinks of the concept of risk aversion as involving broad disfavoring of risks and losses for many psychological reasons, but economists typically mean something narrower by it. They say that the reason a rational person would prefer to avoid risk is that because of the diminishing marginal utility of wealth, a 50/50 chance of getting \$90 or \$110 is in fact worth less than \$100 (because the difference between \$110 and \$100 is less than the difference between \$100 and \$90). To put it more starkly: even if people were purely rational and had no emotional reasons for disfavoring risk or overweighting losses compared to gains, they wouldn't risk their one dinner tonight for an even chance between zero dinners and two dinners tonight. Zero dinners would be much worse than one, whereas two dinners wouldn't be much better than one. This isn't just a result of psychological disfavoring of risk; it's a result of the value of two meals versus one versus zero. The same is often true of money, particularly if the sums are large enough. Accordingly, even purely rational people would be expected to turn down many fair, or even favorable, bets as long as they experience a diminishing marginal utility of wealth.

might not spend a greater amount to reduce the risk of breach from 25% to 24%, even though this reduction is worth \$105 to the buyer.¹³⁷

Like other alternative contract-damages models, this model is unadministrable. It would be nearly impossible to measure the subjective valuations that buyers put on slight reductions in the risk of breach. It would also be nearly impossible to isolate these slight effects from the much larger effects caused by preexisting wealth differences among promisees. A buyer with a net worth of \$10 million will likely value any given increase in precaution much less than would a buyer with a net worth of \$100,000, and these preexisting wealth differences are likely to swamp the differences in wealth that result from differences in expected losses from breach.¹³⁸ Perhaps Craswell would suggest that these other wealth effects should be accommodated too, but a remedial regime that considers such effects would break sharply from the common-law tradition against basing nonpunitive damages on a party's wealth.¹³⁹

Moreover, because Craswell's goal is to give promisors efficient incentives, under his model the subjective valuations of those promisees that happen to suffer harm from breach should not be controlling.¹⁴⁰ To provide the efficient incentives that Craswell seeks to attain here, courts would have to average the subjective valuations of *all* of a seller's promisees, and courts are particularly ill-equipped to make bulk determinations about the subjective valuations of individuals who are not parties. In other words, Craswell's proposal depends not only on impossible-to-measure subjective valuations that a promisee puts on a promisor's precaution, but even worse, on the im-

137. Under a remedial regime that perfectly implements the indifference principle, promisees would face no risk of loss from breach, and therefore would be indifferent between a 25%-to-24% reduction, a 2%-to-1% reduction, or any similar reduction. At least theoretically, then, the indifference principle solves the problem that Craswell here addresses. But, because in practice damages are imperfect, it is fair to assume, as Craswell does, that promisees face *some* risk from breach. See Eisenberg, *supra* note 1, at 989-97 (explaining the various reasons expectation damages will fall short of the indifference principle in practice).

138. Moreover, individuals tend to undervalue costs that may appear in the future, reducing even further the relevance of wealth effects based exclusively on expected costs deriving from the risk of breach. See Melvin Aron Eisenberg, *The Limits of Cognition and the Limits of Contract*, 47 STAN. L. REV. 211, 222-25 (1995). Put simply, actual large wealth effects will swamp speculative small ones, perhaps to the point where it is unlikely the latter even exist.

139. See Michael J. Trebilcock, *The Role of Insurance Considerations in the Choice of Efficient Civil Liability Rules*, 4 J.L. ECON. & ORG. 243, 247 (1988) ("[A] given loss reduces the utility of a rich person less than a poor person . . . [but this is a consideration] that by long historical tradition in common law civil disputes the courts are supposed sedulously to eschew. If they were now to become influential in determinations of liability, they would cast courts in a radically new role.").

140. Craswell, *supra* note 5, at 1169.

possible-to-measure subjective valuations of a group of promisees who are not in court.¹⁴¹

E. Remedial Regimes Designed to Promote Efficient Behavior in Civil Dispute Resolution

Craswell has also identified a number of ways that contract law's remedial regime can influence parties' behavior in civil dispute resolution.¹⁴² These effects tend to have opposing consequences. For instance, Craswell notes that damages measures that result in lower damages lead initially to fewer lawsuits because the expected value of any given lawsuit declines—and this is desirable, because it reduces litigation costs.¹⁴³ As a consequence, however, wrongdoers expect to pay less damages for their wrongs, which will lead them to cause more harm, which in turn tends to increase the number of lawsuits “even while the probability of any particular wrong being litigated had declined.”¹⁴⁴

Similarly, Craswell suggests that higher damages might increase litigation or collection costs because they could cause courts and juries to demand more proof, encourage defendants to invest more in litigation, or encourage defendants to find more elaborate ways to hide their assets.¹⁴⁵ But higher damages also deter wrongs, and when there are fewer wrongs, plaintiffs have less reason to file claims; as a result, litigation costs may fall. The

141. Another problem with Craswell's endeavor is that it does not properly accommodate the time interval between precaution and breach. For Craswell's proposed regime to be effective, it would have to influence the seller's decision at the time when she has the opportunity to take the precaution. Imagine that we could determine efficient incentives for the manufacturer to take a particular decision during the course of manufacture that would reduce the risk of breach from 25% to 24%. Suppose the window of opportunity to take this precaution runs from March 1 to March 31. Courts, when awarding damages, would aim to influence the seller's decisions during that interval. As a result, courts could not take into account any information that became available after March 31—including, say, information about buyers' new subjective values. But if damages awarded in the present are based on figures from the past, then they can give sellers perverse incentives for precaution in the present. For example, even if courts could calculate damages that provide the seller ideal incentives in March, this level of damages could give the manufacturer inefficient incentives to take an unrelated precaution in April or to recall a defective product in October (in view of the product's then-estimated danger and the value that buyers place on being safe from this danger). In March, when the manufacturer has the opportunity to take the relevant precaution, she would need to consider the subjective values of her buyers in and after September. But during the manufacture of a good, the class of buyers is often indeterminate: the very identities of the buyers are unclear, and even the rough characteristics of buyers in bulk may change during the course of a product's design and manufacture.

142. Craswell, *supra* note 5, at 1169-70.

143. *Id.*

144. *Id.* at 1170.

145. *Id.*

elusive nature of these effects, and the fact that they point in opposite directions, suggests that they matter little for any practical analysis of contract law's remedial regime.

CONCLUSION

In a well-known essay, Milton Friedman claimed that the task of positive economics is "to provide a system of generalizations that can be used to make correct predictions about the consequences of any change in circumstances."¹⁴⁶ Correspondingly, Friedman claimed, the validity of the assumptions underlying an economic model should not be judged by evaluating the assumptions directly. Instead, the assumptions should be judged according to whether the model yields sufficiently accurate predictions.¹⁴⁷

Neither of Friedman's claims normally applies to law-and-economics remedial models. These models are almost invariably prescriptive, not predictive: their purpose is either to support an existing rule or to argue that an existing rule should be modified or replaced. To put this differently, law-and-economics remedial models are usually normative, not positive. The prescriptive nature of these models is not a strike against them: there is nothing wrong with developing prescriptive rather than predictive models. However, the prescriptive nature of the models has three important implications.

To begin with, Friedman's claim that the validity of the assumptions underlying an economic model should be judged by the accuracy of the model's predictions cannot support most remedial models, because it is almost impossible to empirically determine the efficiency effects of continuing, modifying, or replacing an existing remedial rule. As Eric Posner has pointed out:

To generate predictions, one would need a vast amount of information about the characteristics of the parties and the transactions. If one remedy is best when renegotiation costs are high, and another is best when renegotiation costs are low, we need some way to measure renegotiation costs. If the optimal remedy depends on the shape of probability distributions for sellers' costs and buyers' valuations, we need this information as well. Yet no one has attempted to collect this information, and it is difficult to imagine how this task could be accomplished.¹⁴⁸

Accordingly, the validity of the assumptions that underlie a remedial model, and the legal regime it supports, must be evaluated directly, on the basis of prudential judgment, rather than by the model's predictive success

146. MILTON FRIEDMAN, *The Methodology of Positive Economics*, in *ESSAYS IN POSITIVE ECONOMICS* 4 (1953).

147. *Id.* at 15.

148. Eric A. Posner, *Economic Analysis of Contract Law After Three Decades: Success or Failure?*, 112 *YALE L.J.* 829, 838 (2003).

or formal validity. In law-and-economics—as opposed to straightforward microeconomics—the formal validity of a model is only a first test. Other tests are whether the legal regime suggested by a model is administrable, whether the model takes institutional considerations into account, and whether implementation of the model would involve more costs than benefits. Recent proposed alternatives to the expectation measure fail these tests.

Finally, each proposed alternative remedial model focuses on one or at most two remedial goals and disregards the rest.¹⁴⁹ As a result, the goal or goals on which each model is based, and the remedial regime the model promotes, usually conflict with the goals on which other models are based and the regimes the other models promote. Such conflicts can be resolved only by giving primacy to one or two goals over the others. The choice of which goal or goals should be given primacy cannot be resolved by analyzing the formal validity of the models that are driven by those goals or by measuring the extent to which the models are predictively sound. Accordingly, to the extent the choice among goals is instrumental, the issue of primacy can be resolved only by the application of sound prudential judgment concerning the importance of each goal in efficiency terms. Our own judgment, which we believe is widely shared, is that the goals of achieving efficient rates of precaution and performance and supporting surplus-enhancing reliance are more weighty—indeed, far more weighty—than the goals to be served by any of the alternative models.

149. *Id.*