AN INTRODUCTION TO THE ECONOMIC ANALYSIS OF CONTRACT REMEDIES

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This article, in its brief compass, cannot provide a comprehensive survey of the economic theory of contract remedy. It serves, instead, as an introduction to the economic concepts and arguments that underlie the large, growing literature. Since this article seeks to outline the thrust of the economic analysis rather than provide the detail, it inevitably abridges the analytical results of and arguments about any particular doctrine. This condensation obscures some dissension among analysts about the shape of particular rules.1 Disagreement, when it exists, however, rests not on analytic foundations but upon empirical judgments about the nature of costs and of particular markets.2

Section A introduces the basic concepts underlying the economic theory of law. It then places the economic theory of contract remedy in the context of a broader theory of contract law. Section E forms the heart of this article. It develops the analysis of money damage remedies in detail. This analysis begins by considering a very simple world. It then introduces complexities that typify real markets. Subsequent sections briefly discuss particular doctrines.

A. Introduction

1. The Growing Use and Importance of Applying Economic Analysis to Legal Problems

In recent years, traditional legal theories of contract have been radically rethought or revised in light of the application of economic analysis to legal problems.3 The impact of economics can be measured

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1. See, e.g., the articles cited infra in notes 75-81. The literature on liquidated damages also reaches varying conclusions as to the shape of particular rules.

2. In the case of specific performance, for example, the disagreements turn on judgments concerning the extent to which expectation damages may fail to be fully compensatory, and the extent to which the availability of specific performance would allow the promisee to exploit the non-performing party in post-breach negotiations.

3. Scholars began to apply economic analysis to common law problems in the early 1960s. The first applications were to tort and nuisance in the classic work of G. CALABRESI, COSTS OF ACCIDENTS;

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not only by the rising tide of law review articles devoted exclusively⁴ or partially⁵ to economic analysis but also in the Restatement (Second) of Contracts,⁶ which makes reference in a Reporter’s Note to the efficiency criterion as support for the traditional measure of expectation damages.⁷

While courts have not yet sought guidance from economic analysis, an understanding of its principles is likely to prove useful to the practitioner for several reasons. First, economic analysts have offered substantial arguments for revising or rationalizing specific doctrines. Those seeking to reform the law governing liquidated damages⁸ or spe-


⁶ Restatement (Second) of Contracts (1981).


The unsystematic application of economic principles may be a result of timing. Rigorous economic models of contract remedies did not appear until 1979 and 1980 and, then, in economics journals rather than law reviews. See Diamond & Maskin, An Economic Analysis of Search and Breach of Contract, I: Steady States, 10 Bell J. Econ. 282 (1979) and Shavell, Damage Measures of Breach of Contract, 11 Bell J. Econ. 460 (1980).

⁸ See infra text accompanying notes 99-100.
cific performance\(^9\) or to rationalize the law of mitigation\(^10\) would do well to consult the economically informed literature.\(^11\) Second, economic analyses center on the incentives to perform that each contracting party faces. This focus is instructive to the drafter, since it may suggest ways to structure performance that will avoid future problems.

2. Relation of Economics to Traditional Theories of Contract

To understand the contribution of economics to the theory of contractual remedy requires some knowledge of its relation to traditional theories of contract. Traditional views of contract law have sought to answer two questions: (1) Which promises should the law enforce? and (2) What sanctions ought the law impose for breach of those enforceable promises? Ideally, a theory of contract would be unified and consistent; it would answer the second question concerning sanctions consistently with the justification that identified the set of legally enforceable promises. The economic theory of contract remedy invokes the same criterion as the economic theory of contract enforcement. This unity constitutes one of its major advances over more traditional theories.

Traditional theories of contract have been articulated at two levels. Most fundamental has been the view of contract as promise, which characterizes the law of contract as a social analogue, modified for reasons of policy, of the moral requirement that an individual ought to keep her promises.\(^12\) This theory's major failing is that it does not integrate the choice of sanction with the moral theory demanding that promises be kept. The second level of theorizing about contract has been less abstract. It examines specific doctrinal puzzles confronted by the courts and attempts to rationalize a confused mass of cases into a more coherent set of principles.\(^13\) This line of research does not always seek to link the various solutions to doctrinal puzzles into an unitary theory of contract.

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9. See infra text accompanying notes 75-94.
10. See infra text accompanying notes 101-106.
11. Some recent appointees to the federal bench should be especially open to economic arguments. Richard A. Posner and Frank Easterbrook of the Seventh Circuit, Stephen Breyer of the First Circuit, and Ralph Winter of the Second Circuit all contributed to the economic analysis of law before being appointed to the judiciary.
12. C. FRIED, CONTRACT AS PROMISE: A THEORY OF CONTRACTUAL OBLIGATION (1981) is the most recent and lucid exposition of this tradition.
13. Thus, in the context of contractual remedies, Farnsworth was able to reduce the theory of contract remedy to seven questions. Farnsworth, Legal Remedies for Breach of Contract, 70 COLUM. L. REV. 1145 (1970).
Economic analyses reject the view of contract as promise, and replace it with the idea that contract law ought to promote "efficiency." This economic formulation of the purpose of contract is more consistent with some insights of traditional, doctrinal theorists. In their classic 1936 and 1937 articles, Fuller and Perdue articulated several policy goals of contract law that evoke economic ideas. In particular, Fuller and Perdue suggest that one function of contract law is to deter breach or, equivalently, to encourage promisors to keep their word. Economic analysis has adopted a qualified version of this goal. The economist argues that only some breaches should be deterred. If the gain to the promisor from his breach outweighs the loss to the promisee, the promisor should not perform. The threat of contract remedies should therefore deter only those breaches from which the gain to the promisor does not exceed the loss to the promisee. For the economist the question has become not whether the law of damages should deter breach but rather how much deterrence is desirable and what remedies induce this optimal amount of deterrence.

B. The Elements of the Economic Theory of Law

1. Economic "Claims" about Law: An Introduction

The economic analysis of law consists of four distinct, interrelated claims about law; only two of these claims need concern us here. The first claim contends that legal rules should be "efficient." By this, economic analysts mean that legal rules should lead to states of affairs in which no person can be made better off without making...
someone else worse off.\textsuperscript{19} The second claim posits that since people respond to legal rules in an "economic" fashion, one may use economic theory to predict the behavior of people in response to particular legal rules. For example, economic theory allows us to predict when a promisor will fail to perform a contract if the legal remedy for non-performance is expectation damages.

2. Assumption of Rational Behavior

Both of these claims rest on a concept of rationality. All economic decision makers are assumed to have "preferences" which are "rational." Suppose an individual must choose some package of goods and services to consume from among a large group of packages labeled A, B, C, . . . etc. To have "rational preferences" means only that: (1) if presented with a choice between any two of the packages, say A and B, the individual could state whether she prefers to have A rather than B, B rather than A, or that she is indifferent between the two; (2) she could make this preference comparison for every possible pair of packages she might be asked to evaluate; and (3) after evincing a preference for A over B and for B over C, when presented with a choice between A and C she must necessarily (to be rational) prefer A over C. This third condition is called "transitivity." Together, these three conditions imply that an individual can rank all possible packages in order of preference. In most instances, this preference ranking can be represented by a "utility function" in which the individual's utility level is an index of preference satisfaction.\textsuperscript{20}

"Rationality" requires not only "rational preferences" but also a "rational goal," which is assumed to be preference (or utility) maximization; i.e. when confronted with any set of choices, the individual

\textsuperscript{19} For a more complete discussion of the meaning of "efficiency" see infra text accompanying notes 23 and 24.

\textsuperscript{20} This formulation of preferences as utility is sometimes helpful in the context of commercial contracts where it seems plausible to assume that commercial actors seek to maximize profits. This assumption has two parts. First, the utility level from some course of action may frequently be approximated by the profits the commercial actor expects to derive from that course of action. Second, the businessman chooses the course of action that yields the highest profits.

We can construct a utility function to represent an individual's preferences as follows. The function has the property that the individual prefers package A to package B when and only when the "utility" she derives from A exceeds the utility she derives from B. Furthermore, choosing the package that she most prefers now translates into her "maximizing her utility" or choosing that package which has the highest utility index.

As intimated in the text, not all preference orderings can be represented by a utility function. Suppose I rank alternatives on the basis of two characteristics 1 and 2. I prefer an alternative A to B if A has more of characteristic 1 than B or if A and B have the same amount of characteristic 1 but A has more of characteristic 2. Preferences of this type (called lexical) are not representable by continuous utility functions. See Debreu, A Theory of Value (1959).
chooses that option or package that she most prefers. While the assumption of optimal choice may seem innocuous, it does have counter-intuitive implications. Most choices that confront people are very complex and require the individual to identify and consider many contingencies. For each contingency, she must evaluate the consequence of her choice and the likelihood that the contingency will occur. The difficulty of the choice process is heightened if one also considers the costs involved in listing and evaluating these differing contingencies. The assumption of rational choice implies that these obstacles and costs do not prevent the individual from choosing the alternative that maximizes her welfare.

3. Risk Aversion

In a commercial context, profits may serve as an index of utility or a measure of preference satisfaction. Profits are not, however, a completely satisfactory index of preference even in the commercial context since businessmen (and others) frequently care about the risks to which a course of action may expose them. For example, someone might prefer a course of action which guarantees a profit of $1,000 to another which offers a 50% chance of a profit of $800 and a 50% chance of a profit of $1400 (an expected profit of $1100). This preference for guaranteed returns, even at the cost of lower expected profits, explains why people purchase insurance. An insurance contract reduces the variation in wealth to which an individual is exposed, at the cost of lowering her wealth by the amount of the premium payments. Economists call this preference for certain, as opposed to uncertain, returns “risk aversion.” Someone who is indifferent between a risky opportunity and receiving with certainty the expected (or average) value of that risky opportunity is said to be “risk-neutral.” As we shall see, the degree of risk aversion which people exhibit may affect the choice of the most “efficient” contract remedy.

4. The Claim of Efficiency

This underlying idea of rationality may clarify the two claims, of efficiency and of economic behavior under law, made by economic analysts of law. A legal rule is efficient if it induces people to behave in such a way that no one can be made better off (in terms of her own

21. The expected profit is calculated by multiplying the .5 chance of a $1400 profit times $1400 and adding it to the .5 chance of an $800 profit multiplied by $800. This expectation is the probabilistic average. While the course of action never yields $1100, if the course of action were repeated many times, the average return to the actor would be $1100.

22. See infra text accompanying notes 61-63.
preferences) without making someone else worse off.\textsuperscript{23} At an efficient point, no mutually beneficial bargains are available. An example may clarify this definition. Suppose a "society" of ten people has a total of $1000 to divide among the group. Assume each actor cares only about the amount of money she receives. A division of the $1000 among the ten people is efficient if the sum of the money allocated to the people totals $1000. That is, none of the social wealth is "wasted." If, for instance, the society distributed only $900 by giving each person $90, then allocating an additional $20 to person A would make A better off without harming any of the other nine people. Thus, the initial allocation was not pareto efficient. Dividing the $1000 equally among the 10 people is efficient since any redistribution from that division will help someone only if someone else is harmed. Of course, there are many divisions of the $1000 which are efficient. Allocating any one of the ten individuals the entire $1000 and giving nothing to each of the other nine is efficient because increasing the wealth of anyone else above $0 requires reducing the wealth of A.

If, as in the example, the social wealth is fixed and needs only to be distributed among various claimants, it is difficult to see how waste could occur. However, in contract, as in most instances, the legal rules may affect the total amount of wealth as well as its distribution among claimants. An efficient set of contract rules would stimulate the production of wealth given some fixed distributional arrangement.

Efficiency as defined here is not equivalent to profit maximization in a society even when profits are accurate measures of utility. Consider a world in which any change in the legal rule would have only one effect. The change would allow merchant A to increase her profits by $100 but would reduce merchant B's profits by $50. The prevailing legal rule is efficient since no merchant can increase her profits without reducing the profits of someone else. But the prevailing legal rule does not maximize profits in the commercial community because, by hypothesis, any other rule would increase total profits by $50 (the difference between merchant A's gain and merchant B's loss).\textsuperscript{24} Some scholars have argued that profit maximization in the community, and not efficiency as defined above, is the appropriate criterion with which

\textsuperscript{23} This concept of "efficiency" is sometimes called "pareto efficiency" or "pareto optimality" after Wilfredo Pareto, who first introduced the concept in W. PARETO, MANUEL D'ÉCONOMIE POLITIQUE (A. Bonnet, trans. 1909).

\textsuperscript{24} Readers should also note that the goal of community profit maximization ignores the fact that some, or all, of the merchants may be risk averse. When individuals in the community care only about their own profits, the legal rule that maximizes community profits will be efficient if everyone is risk-neutral.
5. Claim of Economically Rational Behavior

The conception of rationality also underlies the economic theory of how people respond to legal rules. Economists assume that people, when making decisions, take into account the legal consequences that their decisions might entail. For instance, a manufacturer of a product will choose its quality control procedure by comparing the costs of each type of quality control procedure with the resulting reductions in the expected amount of product liability awards (and any change in profits from changes in sales or prices that accompany the quality control procedure) it would have to bear.

Economists also recognize a second effect that legal rules may have on behavior. This second effect arises because of the different decisions for which a legal rule may be relevant. In most cases, economists consider how the legal rule affects behavior ex ante, that is, when people are contemplating their choices but before any untoward events have occurred. Thus, economists study the effect of legal rules on the manufacturer's choice of quality control procedure before the injury has occurred or on the merchant's decision whether to perform a contract before a loss from breach has been imposed on the promisee. Legal rules, however, may affect behavior after the quality control standard has been chosen or after the breach has occurred. These "ex post" effects arise because the legal rule influences the negotiations between the affected parties (the manufacturer and the injured party, the promisor and the promisee). In this latter situation, the legal rule determines the "endowment" or "threat point" of each party, because it defines what will happen if the parties fail to agree. No party would accept less in negotiations than she would receive (net of transaction costs) under the legal rule, or pay (including transaction costs) more in negotiations than he would be liable for under the the legal rule. This consideration is very important and is discussed more thoroughly in section E. 6.


26. If the outcome of the case is uncertain either because the decision of the fact finder is uncertain or because the legal rule itself is uncertain, then the limitations on what negotiators will accept in settlement must be adjusted for the risk.

C. The Economic Theory of Contract

The economic theory of contract seeks to answer the two questions that confront every theory of contract: what promises should be enforced at law and what sanction should attach to non-performance? The economic theory resolves both questions by reference to a simple unitary principle: The law of contract should announce those legal rules that lead to efficient behavior. Elaborating this principle into concrete rules is, however, a subtle and difficult task.

1. The Economic Theory of Contract Formation
   a. Negotiating Over Contingencies

The economic analysis of contracts immediately confronts a difficulty absent from standard economic inquiries. In the usual exposition of economic theory, interactions are mediated by markets. The terms of exchange between individuals are determined by impersonal forces. Contracts, however, although subject to "market" constraints, record the terms of exchange as negotiated by the parties. Thus, to understand the incentives that contract law creates for promisors and promisees (and potential promisors and potential promisees), one must have a theory of contractual formation, a theory that identifies which contingencies the contract covers and how it provides for them.

The assumptions of rationality and utility maximization provide a theory of contract formation: every clause must be "rational" for each party. In negotiating over a particular contingency, each party will evaluate the worth (or cost) to her of contract performance under that contingency. The promisor will demand sufficient payment to cover her expected costs — i.e., her costs in the event that the contingency should arise, discounted by the probability that the contingency will not occur. The promisee will not agree to pay more for the promisor's performance than the discounted value to her of delivery of the performance under the particular contingency. If the discounted value to the promisee of performance is less than the discounted cost of performance to the promisor, the parties will fail to agree (or will modify the performance requirements in that contingency so that the exchange is mutually beneficial).

   b. "Incomplete" Contracts

If negotiation were costless, the parties would draft complete contracts that defined the terms of performance under every possible contingency. Drafting and negotiation are in fact costly and these costs

28. See supra text accompanying note 20.
influence the choice of contingencies for which the agreement will explicitly provide. Clearly, economically rational parties will draft clauses that cover the most significant contingencies. The significance of a contingency depends primarily on the value and cost of performance and on the likelihood that the contingency will arise. Contracting costs consequently imply that actual contracts are incomplete; economically rational parties will find that the cost of addressing every contingency would exceed the benefits of doing so.

The inevitable incompleteness of contracts underlies one economic function of contract law. When a contingency not addressed in the contract occurs, a major function of contract law is to fill in the gap in the contract with the term that the parties would themselves have chosen had they elected to provide for that contingency. Of course, if the parties know that the law will, for some particular contingency, imply contract terms close to or identical to the terms they themselves would have negotiated, they may reduce their own drafting costs by omitting that contingency from the contract. The economic criterion of efficiency identifies a set of desirable gap-filling rules that minimize the costs that all parties spend on drafting and negotiation. Since the rule will apply to every contracting pair (unless negated by the agreement of the parties), the efficient gap-filling rule is that rule which most closely corresponds to the term which the majority of bargainers would choose for themselves.

2. The Economic Theory of Contract Remedy

According to the economic theory of contract law, the purpose of contract remedies is to induce the parties to act efficiently. This idea proves quite complex because a contract involves a large number of interrelated acts. To illustrate the difficulty in inducing efficient action through law, it is useful to consider circumstances in which we may represent individual utility by profits. An individual will seek contracts and contract terms that maximize her own profits. However, the legal rules governing damage awards may have several effects on profits, and a complete economic analysis should consider all of them.

Consider, for example, the rule that determines how much the promisor must pay in damages to the promisee in the event of breach.

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29. The substance of a clause addressing a particular contingency may also be affected by cost factors. It may be impossible or too costly to monitor performance directly. The parties will then condition performance on observable events and behavior.

30. The analysis is actually a bit more complex. Different contractors will benefit differently from having the clause that best fits their needs. The law should provide a rule that is close enough to the needs of the parties that the costs of drafting exceed the additional benefits to be gained from including the optimal clause.
This rule can influence the profits of potential contractors in at least five different ways. First, the damage measure might influence a merchant's search for a contracting partner. For instance, suppose party A, who wants to sell a handmade widget, meets B, who agrees to pay $100 for the widget when A completes its production and delivers. If contract law provides that the seller need not pay any damages for non-performance, A might continue to search actively for a better buyer (one willing to pay more than $100 for the widget) because if A receives a higher price, her profits will increase. If treble damages for non-performance were the rule, however, A would be less likely to continue to search for a buyer since any increased profits she earned from a sale at a higher price would be reduced by the treble damages she would have to pay to B. Second, the damage measure might affect the number of contracts that actually get formed. For instance, if treble damages prevailed, many potential promisors might be unwilling to enter agreements and some mutually beneficial exchanges might not occur. Third, the damage measure could alter the contract that the parties actually write. For instance, a rule that levied no damages for non-performance might encourage parties to draft installment contracts that alternated the performance of each party, thus limiting the injury resulting from any non-performance and also providing continuing incentives to perform, or to create bonding or other security arrangements. Treble damage rules, on the other hand, might induce the parties to draft lengthy lists of conditions excusing non-performance. Fourth, the legal rule might influence the extent to which the promisee acts in reliance on the promise. If the damage measure awards treble damages to the promisee, she will have an incentive to increase her reliance expenditures. Conversely, if she were to receive nothing in the event of non-performance, she will be unlikely to expend any resources on reliance. Fifth, the rule governing damage awards could influence the promisor's decision whether to perform. If the rule denies the promisee any compensation, promisors are more likely not to perform than if the rule awards compensatory damages. Treble damages, of course, would result in promisors performing even more often than they would under a rule of compensatory damages.

Identifying the rule that leads to efficient results is therefore a demanding task, because one must trace out the effects of each possible legal rule on each of these five decisions.31 While there has been some analysis of the effects of legal rules on search,32 the economic

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31. One might want to consider as well the effects of the rule on post-breach negotiation since this will, in turn, affect the five initial decisions.
32. Diamond & Maskin, supra note 7.
analysis of contract remedy has focused principally on two decisions: the promisee’s decision to rely and the promisor’s decision to breach. Thus, assertions in the economic literature on contract that a particular rule of contract is efficient (or profit maximizing) may mean only that the rule is efficient in one or both of these respects, without consideration of the rule’s effect on the decisions to search, form and draft.

Several factors can further complicate this analysis. As noted previously, the contractors’ attitudes toward risk may alter the effects of a particular rule. A rule of expectation damages, for instance, completely insures the promisee against loss, so that his aversion to risk will not affect his decision to rely; but if damages are not fully compensatory, a risk-averse promisee will choose a lower level of reliance than a risk-neutral promisee. In addition, contracts do not exist in a vacuum. For some contracts, there are well-developed markets in which the promisee may “cover” a breach; for others, such markets do not exist. Sometimes a risk-averse contractor may insure with a third party against certain causes of non-performance. Some people repeatedly contract within the same community. This allows individuals to develop reputations for being “good performers.” The existence of such reputations, or of other forms of a “credit market,” may alter the effects of a legal rule.

The economic analysis of contract remedies has grown sufficiently rich and sophisticated to address, at least in part, most of the considerations listed in the above section. Other complications, however, have thus far remained outside the scope of analysis. For instance, little attention has been paid to the fact that courts may err in their determination either of existence of a legal right to recover or of the amount of damages due the promisee. In addition, models have not sufficiently accounted for the variation in characteristics of contractors. Such differences among contracting pairs as relative risk aversion, relative wealth, and the set of available production technologies might imply that each pair should be subject to a different legal rule if we seek to induce efficient behavior. Yet the economic analysis has devoted little study to the obvious fact that legal rules are largely independent of the personal characteristics of the contracting parties. This fact may be due in part to moral or other norms that bar discrimination on the basis of certain characteristics. The fragmentation of contract into the law of sales, labor law, and parts of insurance law, among others, might be explained by the desirability of using legal rules that discriminate among types of contractors.

33. See infra text accompanying notes 39-74.
3. The Relation of the Economic Theory of Contract to Doctrinal Divisions

The economic theory of contract does not categorize cases and issues according to legal classifications. Traditional legal scholarship developed conceptual categories such as offer, acceptance, and consideration to order and to analyze contract cases. In such a doctrinal analysis, the judge (or lawyer) first would classify the issue as one of interpretation, excuse, or breach. The remedy then follows from the doctrinal analysis. The economic theory of contract law, on the other hand, views the remedy invoked as the judicial writing of the clause the parties neglected to include. All contract cases thus raise the same concerns. For instance, economic analysts regard the rules of damages as akin to rules of excuse. Viewed in this light, excuse rules simply impose a damage award of zero on the non-performing party. Determining when it is efficient to excuse performance is, of course, important and difficult, but in principle the doctrines of mistake, frustration, and impossibility are subject to an analysis very similar to that of contract remedies presented below.

D. On the Use of Economic Models

Economic theory emphasizes the use of simple, rigorous models of phenomena. Intelligent application of any economic analyses of law to actual litigation, legislation, or drafting problems thus requires careful attention to the limiting assumptions of the particular analysis. A brief discussion of the methodology may facilitate understanding and criticism of proposals based on economic analysis.

Economic theory makes many simplifying assumptions about individual decisionmakers and the environment in which they must choose. We have already noted one key assumption of "rationality," an assumption that may not in all cases be met. These simplifications serve an important function. The behavior of contractors in actual transactions depends on a multitude of interrelated factors. It has proven difficult to disentangle the importance of individual factors from the multitude of possible causes. Consequently, economists re-

34. See infra text accompanying notes 29 and 30.
35. Excuse cases may be identified by certain economic characteristics such as the importance of preserving incentives for individuals to gather economically relevant information.
37. See supra text accompanying note 20.
duce complex situations to simpler ones in which these logical relationships can be understood. After the simplest models have been worked out, the analysis is extended to more complicated situations. For example, the study of the efficiency of breach rules began by assuming that individuals were risk-neutral and by considering only the decision of the promisor to breach. 38 Subsequently, the analysis was extended to circumstances in which parties were risk-averse, where one party decided whether to perform or not and the other party selected a reliance level, and to various market situations. The simplest models allow economists to formulate and to understand the more complex ones. The more complex models provide intuition and insight into the even more complex situations in which people must contract and about which judges must decide.

A useful model will state clearly its assumptions, since evaluation of the model requires that one assess the "validity" of these assumptions. These assumptions identify certain empirical judgments we must make about the world if we are to apply the analysis of the model. How closely do actual actors and situations conform to the assumptions of the model? Are contractors rational? Does the market in litigation have the characteristics of the market assumed in the model? How sensitive is the model to the assumptions made — will the conclusions change radically if we slightly alter an assumption? (For instance, if the model assumes risk-neutrality, would an assumption of risk-aversion instead be likely to alter significantly the conclusions?) What factors have been left out of the model? Is there an independent reason to believe that failure to consider these factors will introduce some systematic bias in the analysis?

A model should also state clearly the question it seeks to answer. Since economists who create models of contract remedies have different concerns than lawyers and judges involved in the litigation of contract disputes, a model may focus on a question of marginal importance to the legal community. Any evaluation of an economic model of contract, therefore, must decide whether the answer sought by the model is one that the law considers important.

With this background in mind, we may now turn to some of the detailed analyses of contract remedies offered by the economic analysts of law. The exposition is organized to give some of the flavor of the method of economic analysis. In the next section, we will begin with a very simple, unrealistic, exchange environment. Subsequent subsections will gradually complicate the analysis by incorporating ad-

38. Barton, supra note 4, and Birmingham, supra note 7 are the earliest works.
ditional factors found in many exchanges. The discussion of subsequent sections will also introduce new analytic ideas and concepts.

E. The Economic Analysis of Monetary Damages

The economic analysis of contract damages seeks to identify the measure of damages that leads to efficient outcomes, ones in which neither promisee no promisor can be made better off without making the other worse off. The ability of a particular measure of damage to achieve efficiency depends critically on the economic context in which the contract is made and the parties' attitudes towards risk. Not surprisingly, the easiest analysis to understand concerns a world of contract starkly simpler than actual commercial contexts, but the conclusions drawn in this simple world underlie and motivate the arguments made in contexts much more relevant to commercial worlds which the law of contract must govern.

1. The Function of Contract Damages

The analysis of contract remedies relies on the above analysis of why contracts are inherently incomplete. The theory of contract formation suggests that the costs of evaluating contingencies and drafting clauses to govern them lead to gaps in contracts. The damage measure is a substitute for the missing contract clause. Consider a situation in which two parties wish to contract before they know how much it will cost to produce the contracted-for good. Suppose that the buyer will derive a value \( v \) from this good. If, after the contract is formed, the seller learns that his cost of production exceeds the value \( v \), the parties could both profit from a renegotiation. The seller would prefer to give the buyer any amount less than his cost of production while the buyer would be willing to accept any payment greater than her valuation of performance, \( v \).

We may translate this analysis to the pre-contract stage. Consider what the parties would do if, at the time of contracting, they knew the actual cost of performance. Clearly, if the cost to the seller were going to exceed the value to the buyer, the two

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39. The first economic analysis of contract damages appears in Birmingham, supra note 3. Barton, supra note 4, provided an informal analysis that provoked much of the formal economic work. Shavell, supra note 7 was the first formal analysis. Subsequent work extends Shavell's results. The following discussion relies heavily on Shavell as well as Kornhauser, Reliance, Reputation, and Breach of Contract, 26 J. L. Econ. 691 (1983). See also Rogerson, supra note 27.

40. See supra text accompanying notes 23 and 24.

41. See section C.1.b.

42. Economists generally assume that finding cover transactions is costless. In real markets, cover is costly and the valuation \( v \) would have to include any incidental damages that the buyer would suffer. The value \( v \) represents a value that places the buyer in as good as position as she would have been had performance occurred.
would not enter a contract; there would be no price that the buyer would agree to pay for which the seller would agree to produce. Even when the parties do not know the cost of performance at the time of contracting, the buyer and seller would agree that, should the cost of performance exceed \( v \), seller will pay the buyer (at least) \( v \) (but less than the cost of performance) rather than provide the good. Such an understanding would be embodied in a complete contract that would specify, for every cost of performance, what the seller would provide. In fact, contracts are usually incomplete with respect to damage rules, but the legal rule governing damages states what the seller may pay in lieu of performing. Since the seller’s decision whether to perform is based on the relative costs of performance and non-performance, the damage rule in effect completes the contract. Ideally the rule governing damages should induce the seller to perform when the parties would have so agreed, and in other cases to provide the appropriate alternative performance in damages.

2. Contract Damages in a Simple World

Imagine an isolated transaction between two parties, buyer and seller, who have no prior knowledge of each other’s behavior and who know that they will not in the future have to deal with one another. The seller agrees to produce and deliver to buyer for a price \( p \) (for example, $75) a product (for example, a custom-made widget for which no substitute market exists). The custom-made widget has a value \( v \) (for example, $100) to buyer. The value to buyer stems from its use in the production of another product the price of which is beyond the control of either buyer or seller. If the widget is not delivered the buyer realizes a value of 0. Assume in addition that neither buyer nor seller cares about risk (i.e. each is risk-neutral) and that the buyer has no opportunity to act in reliance on the contract. After execution of the contract, the seller discovers that the cost of production \( c \) (for example, $80) will exceed the sale price \( p \) ($75). The seller can avoid the cost of production \( c \) by refusing to perform. Finally, assume that the buyer pays the contract price upon execution of the contract.

a. The Seller’s Decision

In these circumstances, the legal rule determining the measure of damages directly influences the seller’s decision whether to perform. We have assumed the seller cares only about his expected profits

43. Throughout this discussion I shall designate the promisor “seller” and the promisee “buyer.” This convention is adopted for convenience only. The analysis applies to contracts other than those for the sale of goods and in situations in which “buyer” is the promisor.
which, ignoring any damage payment (which we will denote $d$), are simply $p - c$ (in our example $-5$), the contract price less the cost of production. Thus, if a damage rule states that the seller does not have to pay any damages in the event he fails to perform, the seller would choose to breach because the profits ($-5$) from performance are less than the profits ($0$) from non-performance. Suppose, now, that the seller faces a damage rule of $d$. He will choose to breach only if it is more costly for him to produce than it is for him to pay damages; that is, the seller will breach when and only when $p - c$ is less than $p - d$ or, equivalently, when $c$, the cost of production, is greater than $d$, the damage payment. So if, using the numerical examples above, $d$ is less than $80$, the seller would choose not to perform.\footnote{44}

\textit{b. The Buyer's View}

For any given damage measure $d$, one may determine whether the buyer in our hypothetical example prefers full performance to breach and payment of damages. The net value to the buyer of performance is $v - p$ (assumed above to be $25$); the net value to the buyer of breach is $d - p$.\footnote{45} Thus, if the damage measure equals the value of performance ($d$), the buyer will be indifferent between performance and damages; the buyer would prefer breach when $d$ exceeds $v$\footnote{46} (damages are more than fully compensatory). Therefore, both buyer and seller would agree that the seller should not perform if $c$ exceeds $d$, and $d$ exceeds $v$ since, in that case, each will prefer damages to performance. Note that the expectation measure of damages (the net value to buyer of full performance) is the smallest measure of damages that produces agreement between buyer and seller. That is, if the damage measure is less than expectation damages, the seller will some-
times choose to breach (because costs are high) when the buyer would have been willing to pay him to bear those costs. Thus, in the numerical example if $d = 90$ and costs were $95$, the seller would not perform even though the buyer would gain $25$ from performance and the seller lose only $20$. Seller's non-performance would be inefficient since there exists an exchange from which both buyer and seller would profit.\footnote{Again, we may recalculate in the event the buyer pays on delivery rather than on execution. We must then recalculate damages net of price and expectation damages in the hypothetical will then be $25$ which is the value $v$ ($100$) less the price $p$ ($75$) (less the value $0$ in this case of non-performance).}

The economic rationale behind this example is simple. The buyer would like the seller's decision to perform to take into account the net value to the buyer of performance over non-performance. The buyer's interest in performance is measured precisely by the rule of expectation damages — the difference between the value of performance and the value of non-performance. A damage measure smaller than expectation damages does not impose the full consequences of his decision to breach on the seller, and he will choose not to perform whenever the cost of performance $c$ is more than the damages $d$, even though $c$ is less than the value $v$ to the buyer of performance.\footnote{At first it might appear that the expectation damage measure is unfair because it induces the seller to bear costs in excess of the price received, forcing him to incur losses. Recall, however, that the analysis assumes the price is set before the cost is known and reflects the average cost the seller expects to incur. At the time the parties enter the contract, the price $p$ will be set to account for possible situations in which the cost of production is high (for reasons outside the control of the seller). After all, the seller will not agree to the contract unless he expects on average that he will earn a normal profit on the transaction. Since his profit depends not only on the cost of production but also on the measure of damages, we should expect the contract price paid by the buyer to rise if the damage measure is higher. A higher damage measure means first that the seller will on average incur higher costs, costs for which he must be paid, and second, more assurance to the buyer of delivery of value, assurance for which she is willing to pay. Thus, under a rule of expectation damages the price of the contract will reflect both the expected cost of production and an "insurance premium" that guarantees the delivery of a value $v$ to the buyer. An analogous fairness concern arises from the observation that since the value of performance to the buyer exceeds the seller's cost, the buyer should be willing to pay more for the performance. Again, the price is set ex ante and should be fair given the allocation of risks determined by the rule of law.}

3. Contract Damages and the Reliance Decision\footnote{Shavell, supra note 7; Kornhauser, supra note 39; and Rogerson, supra note 27, all treat other models of the reliance decision.}

The simple models discussed in sections 1 and 2 above had at least three important assumptions: risk-neutrality, anonymity and the absence of a reliance decision on the part of the buyer. Risk neutrality has already been defined.\footnote{See section B.3.} Anonymity refers to the inability of the parties to use information about the other party or about the transac-
tion to enforce performance; thus, in anonymous markets failure to perform does not affect the promisor's ability to contract at a good price in the future. Reliance refers to investments that will be profitable to the promisee only if performance occurs. In the remainder of this paragraph we shall relax these assumptions in turn and show how they affect the optimal measure of damages. To begin, we consider the effect of the presence of a reliance decision on the choice of a damage measure.

Consider the following situation. Buyer and seller agree that the seller will provide a custom made widget for a price $p$ (again $75$). After the formation of the contract but before the production of the widget the buyer chooses to make some investment $r$ that will enhance the value to her of performance; the larger the investment $r$, the greater the value to the buyer of performance. We may represent this relation of investment to value by the notation $v(r)$. Thus the buyer will receive an amount $v(r) - r$ should performance occur and $-r$ should it not. That is, the buyer will have expended an amount $r$ regardless of whether the seller performs. To continue the numerical example assume the only values of $r$ that the buyer may choose are $0$ and $10$ with $v(10) = 126$ and $v(0) = 100$.

If the seller knows that buyer has expended $r$ and that the value to her of performance is $v(r)$ then, under an expectation damage rule, the seller will, for the reasons outlined in section E. 1., make an appropriate decision whether to breach, based on the relative profits to seller of performance and breach. As we have seen, a rule of expectation damages induces the seller to see the costs to the buyer of the seller's non-performance. Those costs are measured by the difference in value received by the buyer.

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51. Two other aspects of the model will also be examined. The fact that the cause of breach was "unforeseen" will be discussed in section G. A fifth aspect, the absence of a cover market, is discussed in section I.

52. The conception of reliance used here conforms to the usage in economic analyses of contract remedies, but not obviously with the doctrinal usage. For an interesting, provocative and economic interpretation of "reliance" in the spirit of Fuller and Perdue, see Goetz & Scott, *Enforcing Promises: An Examination of the Basis of Contract*, 89 YALE L.J. 1261 (1980). In some sense, Goetz and Scott generalize the notion of reliance in the text and link it to doctrine. Goetz and Scott define two forms of reliance: detrimental and beneficial. Detrimental reliance is the difference (measured in money) between the utility derived from decisions in the absence of a promise and the utility resulting from decisions made in the presence of the promise which is then breached. Beneficial reliance represents the difference (measured in money) between the utility from decisions derived from a kept promise and the utility that derives from decisions that follow from a windfall, at the time performance would have occurred had there been a promise, equal to the expectation. Id. at 1267-70. The "$r$" in the text is a measure of detrimental reliance, since the expenditure would not have occurred but for the breached promise.

53. Recall that the measure of expectation damages is the value of performance $v(r) - r$ minus the value of nonperformance $n(r) - r$. Again we have assumed $n(r) = 0$. 
But the measure of expectation damages is not fully efficient because the buyer's decision to rely is not made in light of the costs she imposes on the seller. When choosing a level of reliance, the buyer does not consider whether the increase in the seller's expected costs is less than the increased value to her of a bit more reliance. The buyer's reliance increases the seller's expected costs because increased reliance implies greater damage payments in the event of non-performance.

For example, suppose that the buyer can choose one of three levels of reliance. She might spend $0, $5 or $10. As before, the value of performance with 0 reliance expenditure is $100, while with $10 spent in reliance it is $126. An expenditure of $5 in reliance also increases the value of performance, but only to $120. Suppose further that there is a 5% chance that the seller's cost of performance would be $125 (and that $125 is the only possible cost of performance between $120 and $126). Under expectation damages and a reliance level of $5 the seller would not perform if costs were $125, but he would perform if reliance were $10. The extra $5 in reliance, however, only increased value to the buyer by $6 while the extra five dollars in reliance increases the expected costs to seller by $6.25.\footnote{We calculate the $6.25, the additional cost to the seller when reliance is increased from $5 to $10, as follows: When the reliance expenditure increases to $10 from $5, the seller will find it profitable to perform an additional 5% of the time. This is so because non-performance will cost him \( v(10) = 126 \) while performance will cost him only $125. Five percent of $125 is $6.25.} Thus, an extra $6 in value delivered has a total (expected) cost of $11.25 — the $5 reliance expenditure plus the $6.25 increase in expected production costs. A complete contract would restrict the buyer to a reliance expenditure of $5 and the value delivered to $120. Thus, the measure of expectation damages does not, in anonymous worlds, induce efficient reliance decisions, although, given the level of reliance, the expectation measure does induce efficient decisions to perform.

4. Reputation\footnote{The argument of this section is formalized and discussed in greater detail in Kornhauser, \textit{supra} note 39.}

The analysis so far has assumed that legal remedies provide the only sanction for non-performance. Such an assumption may be valid when parties deal infrequently with each other and have no source of information about the reliability of their contracting partners, but in many commercial contexts parties trade within a relatively tightly knit community. In this community, they develop "reputations" for reliable performance. The possibility of repeat transactions introduces the prospect of non-legal remedies for breach.

The most obvious non-legal remedy is price. In credit markets,
individuals with a good history or "reputation" for honoring their obligations charge higher prices, or pay lower interest rates. Similarly, people who more frequently fail to perform their contracts receive lower prices or pay higher interest rates.

To understand how reputation interacts with the measure of damages we must make two assumptions that are violated in most commercial contexts. First, we restrict attention to only one aspect of profit that reputation might affect — price. Second, we must assume that reputations are "perfect," i.e. that all parties know precisely the likelihood that a particular merchant will perform or not. Subject to these two caveats we may consider the implications of reputation on the efficiency of contract damage rules.

Consider first the simpler situation in which buyers have no reliance decision to make. We saw in the anonymous world (where sellers have no reputation) that a rule of expectation damages induces the seller to perform only when both parties would have wanted performance. A rule of expectation damages will induce identical behavior in the world with reputation as well; but so will any other measure of damages. Expectation damages create the correct incentive because they reveal to the seller the full consequences of his decision not to perform by requiring the seller to take into account the losses his breach will impose on the buyer. In a world with reputations, the seller takes into account the costs imposed on the buyer, even under a rule of no damages, because failure to perform will lower the seller's future profits by decreasing the price he will receive on future contracts.

One may view this effect in another way. Consider a rule of no damages. Then the price the buyer agrees to pay reflects simply the value of the good discounted by the known likelihood of non-delivery. A seller who improves his reputation raises the price he will receive, because buyers know that the probability of receiving the value of the contract through performance has increased. Now consider a rule of damages between zero and expectation damages; should the seller fail to perform the buyer receives only partial compensation. Now the contract price reflects not only the value of the good discounted for the likelihood of non-delivery but also an "insurance premium" for the amount of damages that the seller pays in the event of non-performance.

56. A good reputation for performance might increase the price that a merchant receives for her goods. But it might also increase the number of transactions she can enter. The economic analysis has thus far formally analyzed only the first of these effects.
57. See section E.2.
58. See supra the end of section E.2.
ages, the size of the insurance premium increases. Moreover, at expectation damages the contract price to all sellers will be identical since the buyer is assured the receipt of full value (either through performance of the contract, or in the form of fully compensatory damages) from every seller regard less of his reputation for performance. So in a market with reputation, every damage measure conveys to the seller the full consequence of his actions. A seller is made aware of the consequences of breach to the buyer from a combination of the lower price he will receive in light of a worsened reputation for performance and of the damages (if any) that he must pay under the prevailing rule.\footnote{This result may seem surprising, but it is consistent with what little evidence we have of business behavior. Stewart Macaulay discovered in a survey of business practice that business people attended little to legal damage remedies. Macaulay, \textit{Non-Contractual Relations in Business} 20 AM. SOC. REV. 85 (1963). This of course would occur, according to the analysis of reputation, if the business community were tightly knit and business people knew that non-performance would be effectively sanctioned, not only through the legal system, but also through price.}

The analysis of reputation produces another surprising finding. If we apply the analysis to circumstances in which the buyer may rely, we discover that not only will a rule of no damages induce the seller to choose to perform when both parties would so desire, but it will also induce the buyer to choose the "correct" amount of reliance. As shown above, under expectation damages the buyer chooses to rely more than she and the seller would have agreed to had they written a complete contract, because the damage rule fully insures the reliance without making the buyer aware of the increased costs she imposes on the seller.\footnote{See \textit{supra} the end of section E.2.} In a world with no damages the costs of non-performance are communicated directly to the seller through the price system, while the costs of excess reliance remain on the buyer. The buyer, in making her reliance decision, will consider the costs imposed by it on sellers because, as her level of reliance increases, she will want to increase the likelihood that the seller performs. To do this, she must purchase from more "reputable" sellers, i.e. ones who perform more often. More reputable sellers, since they assure performance under more adverse cost conditions, must charge higher prices. The buyer, then, will enter a contract with that seller for whom the increased price she must pay for the added assurance of performance just equals the extra benefit she receives from a marginal increase in her reliance expenditures.

The analysis of markets with both reputation and reliance suggests that the law ought to differentiate its damage rules among markets. A rule of expectation damages, while inefficient with respect to
reliance decisions in anonymous worlds, at least induces efficient breach in them. A no-damage rule, however, might perform optimally with respect to both decisions in markets with reputation. One must recall, however, that our analysis assumes perfect reputation; actual markets display significantly less accurate information on reputation. Consequently, prices under a rule of no-damages will not perfectly reflect the seller’s likelihood of non-delivery. Neither expectation damages nor no-damages will work perfectly. Indeed, some splitting rule might be most desirable.

5. Risk Aversion61

A rule of law is efficient when it reveals the full costs of a decision to the party who makes the decision. In the simplest market, characterized by anonymity, risk-neutral traders and no reliance decisions, expectation damages reveal to the seller the full cost of his decision not to perform by reflecting the cost that the decision imposes on the buyer. If a party is risk-averse, however, there are additional costs involved.62 The possibility of non-performance is a risk to the buyer while the possibility of damage liability is a risk to the seller. A risk-averse party would be willing to pay a premium to insure against the risk and hence guarantee that she holds the same wealth regardless of circumstance. A risk-averse buyer, for example, would be willing to

61. Discussions of the impact of risk aversion on the choice of damage measure appear in Kornhauser, supra note 39, and Polinsky, Risk Sharing Through Breach of Contract Remedies, 11 J. LEGAL STUD. 427 (1983). The results of the two studies are consistent. Kornhauser studies the problem in a context in which the promisor’s action affects the likelihood of performance. In Polinsky, the probability that breach will occur is outside the control of the parties.

62. Is it plausible to assume that traders are risk-averse? It seems likely that, when people make exchanges that are small in comparison to their net wealth, they are relatively indifferent to risk, particularly if they are engaged in many such small transactions and the risk from each transaction is independent of the risks from the others. Conversely, if the exchange involves amounts large relative to net wealth, then a party may indeed be risk-averse. For example, a public utility may be risk-neutral relative to contracts for office supplies but risk-averse relative to a contract to build a new generating plant. Similarly, Westinghouse might have been risk-neutral with respect to one contract to supply uranium at a fixed price but risk-averse with respect to all its contracts to supply uranium, since the risks of the contracts were perfectly correlated. (On the Westinghouse uranium transactions, see Joskow, supra note 36.) Thus, the relevance of risk aversion to the analysis of contract rules may depend on the size or nature of the contracts under consideration.

The size of the transaction, however, is not the only relevant consideration. For some risks, markets for insurance may exist. Thus, a party could insure against a particular risk of non-performance. In that case, for purposes of the contract, she would act as if she were risk-neutral. Thus, risk aversion will only be important if third-party insurance is either unavailable or significantly more expensive than whatever risk spreading the parties may do between themselves.

Finally, the above analysis of risk aversion suggests why parties might write liquidated damage clauses even when they face little uncertainty over the amount of liability. If both parties are averse to risk they may endeavor to divide the risks between them; a liquidated damage clause can accomplish this goal.
pay a higher price to assure herself of performance. A seller, on the other hand, would be willing to accept a lower price to avoid payment of damages in the event costs rise too high. In the absence of insurance markets (or other third parties) to accept or to spread the risk, we cannot eliminate completely both the buyer's risk of non-performance and the seller's risk of liability. Thus, it may not be possible to construct a rule that gives both buyers and sellers appropriate incentives. Let us consider several cases.

First, a simple case. Suppose that the seller is risk-neutral but the buyer risk-averse. Ignoring temporarily the possibility of reliance, we can conclude that a rule of expectation damages is still efficient. Expectation damages completely insure the buyer against loss so that she suffers no risk costs. The seller does not suffer any risk costs either, because he is indifferent to risk. Thus, in this simple case a rule of expectation damages remains efficient.

This result, however, rests critically on the simplifying assumptions. Suppose now that the seller is also risk averse. Since he is risk-averse, the seller would most prefer a contract which guaranteed him a fixed profit regardless of what costs were realized. Under expectation damages, however, his profits will vary with his costs. As his costs rise, his profits will fall and this possibility constitutes an additional disutility to the seller. If the seller could purchase insurance against liability (or against fluctuations in his costs), he would do so. In the absence of an insurance market, the ideal contract would share the risk between buyer and seller. The optimal splitting of the risk would depend on the relative risk aversion of the buyer and the seller. If, as discussed in section C. 1., the contract law seeks to fill contract gaps with the clause the parties would have chosen, then the "optimal" legal rule would measure damages differently for different contracting pairs, as the rule would reflect the different relative attitudes towards risk of the parties. There is an important caveat to this analysis. If the buyer and the seller split the risk of non-performance, the seller will, in the event of breach, deliver a value less than \( v \) to the buyer, i.e. he will pay less than expectation damages. Consequently, he will sometimes choose not to perform when his cost of performance is less than the buyer's valuation of performance. These instances of non-performance are, as argued in section E. 2., inefficient since, at the formation of the contract, both buyer and seller would have agreed that performance was desirable. The ideal contract, then, is merely second-best; the benefits of risk-sharing must be weighed against the inefficiency of non-performance occasioned by less-than-expectation
A similar analysis applies to markets with reputation. If buyers are risk-neutral and sellers risk-averse, then the rule of no damages remains efficient when buyers have a reliance decision. If buyers are risk-averse and have a reliance decision, the optimal rule will again depend on the particular attitudes toward risk of the contracting pair.

6. Renegotiation at the time of Non-performance

The discussion so far has ignored another significant consideration in the evaluation of contract remedies. In many instances, after the promisor announces that he will not perform, the parties renegotiate the contract. The possibility of such renegotiation influences dramatically the analysis of damage remedies. Economic analysis of this aspect of contract remedies, however, is tentative and incomplete. Also, the analysis depends upon assumptions about the renegotiation process which may appear unrealistic. Specifically, it is assumed that the renegotiation process does not break down, that the parties are always able to achieve an efficient outcome, and that neither party uses the process to exploit the other.

These assumptions eliminate one inefficiency that occurs when a non-compensatory damage measure is used in an anonymous market. In the absence of renegotiation we concluded that the promisor would sometimes decide not to perform even when it would be optimal for him to do so. If the parties renegotiate, however, this inefficient outcome will not occur, because in the process of renegotiation the buyer will reveal to the seller the full cost of his non-performance. Indeed, the buyer will be willing to pay the seller the additional cost of performance needed to make him indifferent between performance and breach. Similarly, if the cost of performance exceeds the value to the buyer, in renegotiation the buyer would not insist on the seller's performance because, at the time of renegotiation, the buyer would not find it worthwhile to compensate the seller for any costs in excess of the value of the good to the buyer.

Thus, the only difference among damage measures will be the effects on the buyer's reliance decision. Renegotiation alone cannot cure

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63. The inefficiency occurs because the contract does not specify precisely the conditions under which the contract is to be performed. If seller and buyer agreed that seller will perform as long as the cost of performance $c$ is less than or equal to the value of performance $v$ and the parties could reliably observe both $c$ and $v$, the splitting of risk when $c$ exceeded $v$ would cause no inefficiency.

64. The discussion in this section follows Rogerson, supra note 27.

65. See section E.1. In the example there, the seller would not perform when the cost of performance $c$ was greater than the amount of damages $d$ he had to pay, but less than the value of performance $v$ to the buyer.
inefficient reliance decisions because generally the promisee will rely before the cost of production is known, and hence, before the promisor decides whether to perform. Renegotiation will not reverse investment expenditures already made at the time of renegotiation. The prospect of renegotiation will, however, influence the promisee's reliance level because she anticipates the results of any prospective negotiation. Among damage measures, expectation damages induce the promisee to choose her reliance level closest to the optimal amount. The rule of expectation damages has this property because it places the promisee in the best bargaining position. In the event of a decision not to perform the promisee must offer in the post-breach negotiations the promisor a sufficient additional payment to induce his performance. Sufficiency depends upon the consequence of a failure to reach agreement in the post-breach negotiations. These consequences are defined by the damage rule. If the promisor must pay damages $d$ for breach, he will choose to breach whenever his costs $c$ exceed $d$. To induce performance, the promisee must offer in the post-breach negotiations at least $c - d$. Thus, as $d$ rises, the post-breach bargaining position of the promisee improves. Reliance expenditures, however, increase the cost of non-performance to the seller and so augment the promisee's superior bargaining power given by expectation damages.

7. Transaction Costs

The discussion thus far has assumed that costs of initial contract negotiation and dispute resolution were zero. It has also assumed that courts accurately assess whatever measure of damages they select; that is, under a measure of reliance, the courts accurately determine the level of reliance and under an expectation measure the courts accurately assess the expectancy of the promisee. Evaluation of actual contract remedies requires relaxation of these assumptions.

Consideration of bias in judicial estimation of damages proves the simpler task. Let us confine attention to the expectation measure of damages. If the courts systematically underestimate the promisee's expectancy, the promisor will breach too frequently. This result follows directly from the arguments in section E. 2. Similarly, systematic overestimation of the promisee's expectancy results in too little breach.

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66. Specific performance induces reliance decisions at least as efficient as expectation damages. See Rogerson supra note 28, at 41.

67. Of course, as the measure of damages $d$ increases the initial contract price $p$ must rise since the damage measure insures against non-performance. As the extent of insurance coverage increases, the premium included in the price must also rise.

The comparison of other remedies, such as a reliance measure, to expectation damages will depend on whether the court bias in estimation of damages is consistent across remedies or not.

The introduction of monitoring and drafting costs into the model greatly complicates the analysis. The formal analysis is quite technical, and we shall merely summarize the results. The analysis depends on a distinction between production contracts and contracts of exchange. In the former, the seller faces, at the time of execution, uncertainty over cost. If the realized cost of production exceeds the contract price (plus the damages) he will breach. In an exchange contract, breach results only if a second buyer arrives who offers the seller a higher price.

Given this distinction, the results may be simply stated. Suppose that in contracts for exchange, the higher bids made to the seller are also available to the buyer. Then, specific performance is the most efficient remedy followed by expectation damages. In an exchange contract efficiency requires that the subject matter go to the person who values the good most highly. Suppose, for example, that the promisee has a valuation \( v \) and the third party who approaches the seller has a valuation \( w \). Then the seller should breach if and only if \( w \) is greater than \( v \). If the measures of damages underestimates \( v \), the seller may sometimes breach when he should not; if the measure overestimates \( v \), he may sometimes perform when he should breach. If, however, third party offers were available to the promisee and specific performance were the remedy, the good would always reach the party who valued it most highly. Under expectation damages the third party need only offer a price sufficient to cover the damages the seller will incur from breach. Under specific performance, however, the promisee would only agree to a transfer to the third party if the third

69. Id.
71. See Shavell, supra note 68, at 140. Shavell compares only four remedies: specific performance, expectation damages, reliance damages, and restitution, where restitution is measured as return of the contract price \( k \). (In his model the buyer pays a price \( k \) and it is the seller who breaches.) If we assumed that the buyer did not pay until completion of the performance and then breaches a performance contract prior to complete performance on the part of the seller, restitution becomes a much more complicated remedy. If, at the time of execution, the seller underestimated his costs, a measure of restitution based on seller's costs would overstate his damages. Alternative measures of restitution would include ones based on the value of the performance to the breaching party. Mather, Restitution as a Remedy for Breach of Contract: The Case of the Partially Performing Seller, 92 Yale L.J. 14 (1982), argues that if expectation damages undercompensates because of non-indemnifiable litigation costs, it is neither pareto superior nor pareto inferior to a market value of services provided measure of restitution.
party price exceeds $v$. Similar arguments underlie the analysis of the other cases of exchange contracts and all cases of performance contracts. These analyses allow us to conclude that in all other cases, expectation damages are best when they are measured sufficiently accurately; specific performance is best if expectation damages are underestimated; and reliance damages are best if expectation damages are overestimated and specific performance leads to too much performance.\textsuperscript{72}

8. Summary

The above analysis of monetary damages for breach of contract suggests that the rule of expectation damages performs quite well in terms of efficiency when parties are risk-neutral. Even when buyers may rely, expectation damages, although possibly inducing too much reliance, will still cause sellers to make efficient decisions whether to perform. In markets with perfect reputation, however, the rule of no damages performs more efficiently when buyers may rely. All these conclusions, however, are sensitive to the assumption of risk-neutrality. The possibility of ex post negotiation implies that any damage rule, even when actors are risk-neutral, will induce efficient decisions to perform.

A few other caveats are necessary. The models assume contracts in which only one party performs and at most one party relies. Most contracts require both parties to perform and some allow each party to rely. Even when one party has only the obligation to pay, the performer might act in reliance on that decision. The economic analysis of contract has not yet considered these more complex analytic situations.

Furthermore, the criterion of efficiency examines the efficiency of the damage rule only with respect to the decisions to perform and to rely. In section C. 2., we listed three other decisions with respect to which a rule might be efficient. While the decisions to draft and to form contracts have not received much attention, economic analysts of contract generally agree that a rule of expectation damages is not efficient with respect to the decision to search for a contracting party.\textsuperscript{73} Professors Goetz and Scott have further argued that, when markets are not competitive, the expectation measure results in too few promises being made.\textsuperscript{74}

\textsuperscript{72} Shavell, \textit{supra} note 68, at 133 and 140. The comments of note 71 are applicable here as well.

\textsuperscript{73} Diamond & Maskin, \textit{supra} note 7, and \textit{An Economic Analysis of Search and Breach of Contract. II: A Non-Steady State Example}, 25 J. ECON. THEORY 165 (1981).

\textsuperscript{74} Goetz & Scott, \textit{supra} note 52, at 1282. They suggest a measure somewhat less than detrimental reliance as measured by the opportunity cost of accepting the promise. Thus, the measure of damages
F. The Choice between Specific Performance and Contract Damages

1. Introduction

The economic analysis of specific performance and of its merits compared to monetary damages is perhaps the most controversial aspect of the economic theory of contract remedies. Professor Anthony Kronman of Yale has argued that existing legal doctrines governing (and restricting) the availability of specific performance are generally efficient, while Professor Alan Schwartz of the University of Southern California has argued that the injured party should always be allowed to elect specific performance as a remedy. Both writers assume that the law seeks to compensate promisees for the costs imposed by non-performance and both agree that the choice of contract remedy should promote efficiency. They differ, however, in two assumptions on which their analyses depend. These assumptions require them to make two empirical judgments: (1) the extent to which expectation damages may fail to be fully compensatory and (2) the extent to which the availability of a specific performance remedy would allow the promisee to exploit the non-performing party in post-breach negotiations. More recent contributions have extended the debate and refined arguments. An economist, Professor Thomas Ulen, has argued that specific performance should replace expectation damages as the primary remedy for breach of contract. Ulen both grounds

optimal from the perspective of contract formation is the difference between detrimental reliance and an adjustment term that reflects the (relative risk weighted) benefits from reliance on the promise. In competitive markets, the opportunity cost of accepting a specific promise is another, equivalent promise. Hence, the expectation measure reduces to the detrimental reliance measure. Moreover, in a competitive market, the adjustment term will be roughly zero. Thus, in competitive markets, expectation damages on Goetz's and Scott's argument yields optimal incentives to form. For non-competitive markets, their model is not completely satisfying because the adjustment term in the measure of damages is proportional to the probability of breach. This probability, however, is determined by the damage measure.

Satisfactorily modelling the effects of contract remedies on contract formation presents difficult economic issues once one admits that markets are not perfect. The imperfections confronted by potential contractors are various. First, they are often ignorant of the full range of available contractual opportunities. Second, the price for the contract entered into is unlikely to be set in an auction market. Third, the trade is apt to occur in disequilibrium, i.e. before the market has identified the appropriate "equilibrium" price.

77. Other analyses of specific performance occur in Rogerson, supra note 27; Shavell, supra note 68; Linzer, supra note 5; Muris, The Costs of Freely Granting Specific Performance, 1982 Duke L.J. 1053; R. Posner, Economic Analysis of Law 95-96 (2d ed. 1977); and Yorio, In Defense of Money Damages for Breach of Contract, 82 Colum. L. Rev. 1365 (1982). Rogerson and Shavell are agnostic on the empirical questions. Their analyses include parameters for ease of renegotiation.
Schwartz's argument more explicitly in its theoretical underpinnings of the nature of entitlements\(^7\) and raises efficiency concerns not previously advanced. Professors Shavell\(^8\) and Bishop\(^9\) contend that the optimal remedy varies with the nature of the contract.

2. Specific Performance as Compensation

Specific performance solves completely the problem of compensation. Except for problems caused by delay in the delivery of the good or service, giving the promisee what she was promised must, by definition, compensate her. On the other hand, money damages can at best provide her with something of "equal value." The money paid in damages may allow her to purchase another bundle of goods which are equivalent in value to her as the promised performance. If markets are "thick" (that is, transactions are frequent, fungible and inexpensive to find), expectation damages should prove fully compensatory because the promisee can replace the promised performance by a market transaction; she thus gets the same thing she bargained for at (or close to) the same time she requested it. (There may, of course, be a substantial delay in recovering her damages, which would be the difference between market and contract price.) To Kronman, this understanding of markets suggests that the traditional "uniqueness" test for granting specific performance is an appropriate limitation on the award of specific performance, if that test is understood as a judicial declaration that, in certain cases, the court cannot effectively determine the quality of the cover market and hence is likely to undercompensate the promisee.\(^\text{82}\) Schwartz, however, argues that the promisee

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79. Legal-economic analysis distinguishes between the existence of an "entitlement" and the nature of the legal protection afforded the entitlement. Contract law does "entitle" the promisee to performance, but that entitlement might be protected either by what is called a "liability" rule—damages, or by a "property" rule—specific performance.

The primary analysis of entitlement protection focused on nuisance law. Calabresi & Melamed, Property Rules, Liability Rules, and Inalienability: One View of the Cathedral, 85 Harv. L. Rev. 1089 (1972). In nuisance law the analogous forms of entitlement protection would be damages and injunctive relief. That analysis contended that liability rules are appropriate whenever negotiation among parties for the entitlement is costly and difficult. In many nuisance cases, simply identifying the individuals affected by the nuisance may be costly; moreover, coordinating the negotiations among the people affected is likely to be difficult. Any aggrieved party may "hold out" for a huge payment that the nuisance creator could pay to one but cannot pay to all. In contract, however, the parties have no difficulty finding each other and there are seldom hold-out problems created by a multiplicity of actors. The case for protecting contract entitlements by the property rule of specific performance is therefore stronger than in the nuisance example.

80. Shavell, supra note 68. Shavell provides the most thorough but technical analysis of contract. His model considers not only costs of breach and reliance but also costs of negotiation and renegotiation and of monitoring performance.

81. Bishop, supra note 70

82. "Effective" determination includes the cost of judicial decision and administration.
should in all cases be allowed to elect specific performance because in thin markets specific performance insures full compensation (which damages might not provide), while in thick markets promisees will have no incentive to invoke specific performance, as the cover market provides more prompt recompense.

One can interpret the dispute between Kronman and Schwartz differently. In theory, expectation damages ensures that the promisee receives her valuation of performance, at a cost to her of the contract price. Thus, in the example of the previous section, where she paid a price on execution of $p$ and valued the good at $v$, expectation damages were defined as $v$. That is, in the event of breach, the buyer was assured of the value $v-p$ to her of the contract at the time of execution.\footnote{Note that the buyer in our example would have an incentive to breach if her valuation of the good changed after the execution of the contract. Suppose, for example, that her valuation of the delivered good fell from $100$ to $70$. She would then like to “breach” the contract. Since she has pre-paid the price, breach consists of refusing delivery or repudiating and recovering her purchase price. If the seller is entitled to his expectation, the buyer may recover only her purchase price less unincurred costs of production (or, more precisely, less the sum of unincurred costs of production plus the salvage value of the partly produced good).}

In practice, however, expectation damages are generally measured by the cost to the promisee of cover. In the example of the previous section, if the market price at the time of breach were $m$ (for example $85$), in the event of seller’s breach the buyer would receive $m$ ($85$) and then purchase the widget in the spot market. The two transactions would yield her $(v-m) + (m-p) = v-p$, or her expectation ($25$ in the example). In the context of this example, Schwartz and Kronman disagree over the ability of a cover market to provide appropriate compensation.

How could the cover market fail? First, it could fail because $m$ does not measure the true cover price to the buyer. The buyer might incur incidental costs in acquiring the good that, for some reason, are not captured in the traditional measures of damages. Second, the cover market might fail because the good purchased on that market is not a perfect substitute for the contract good. Suppose that, rather than a widget the contract had been for a copy of the complete plays of

As defined in the text, the definition of expectation damages suffers from some ambiguity when production costs are uncertain at the time of execution, the point at which each party’s expectation is to be measured. Suppose, for example, that at the time of execution, both parties know that production costs will be, with equal probability, either $c_1$ (e.g., $40$) or $c_2$ (e.g, $60$). At the time of execution, then, the expected cost of production will be $50$ (that is, $.5(40) + .5(60))$ and the seller’s expectation is $p-c$ (or $25$). Suppose the buyer’s valuation falls below the price and she breaches. If she breaches before any costs are incurred and before the parties learn the cost of production she pays $p-c$ ($25$) in damages. If she breaches after the cost of production becomes known but before any costs are incurred, does she pay $p-c_1$ or $p-c_2$ ($35$ or $15$ depending on whether costs would have been low or high)? The contract does not explicitly specify who bears the risk of cost fluctuations in the event of buyer’s breach.
Shakespeare. Normally, the buyer values any copy of the complete plays equally and awarding her m allows her to realize the value of her contract by purchasing any copy at the bookstore. It may be, however, that the particular copy covered by the initial contract had special value to the buyer, perhaps because it had certain marginal notations she valued or had been the property of a friend or was a first folio of Shakespeare's plays. In these cases, the buyer cannot realize the value of her contract by the purchase of any one of many copies of Shakespeare. She desires a particular copy because it has a special value. For example, the contract may have been for a first folio; the court might determine the market price by reference to the price of the last transaction involving a first folio. The buyer, however, may not be able to purchase a first folio for this price. Nor need that price represent her valuation of the good.

Kronman argues that most transactions do not have special features so that the cover market generally allows the promisee to realize her expectation. Moreover, he contends that the use of specific performance as the general remedy would impose costs either of administration or in the failure of post-breach negotiations. Schwartz disputes the latter contention by noting that the promisee could elect expectation damages and would do so when the cover market functioned adequately.

Ulen carries Schwartz's argument further, but does so without offering a new argument for the failure of the cover market. Rather, he seeks to show that specific performance works as well as expectation damages when the cover market is adequate and performs better when the cover market is not adequate. First, he refers to the distinction made by economic analysis of law between entitlements and protection of entitlements. The entitlement at issue is the one to a "performance," and we must decide whether to protect it with a liability rule, such as expectation damages, or the property rule of specific performance. The general analysis of protection of entitlements contends that property rules are appropriate when there are few barriers to negotiation. Ulen argues that contract remedies meet this condition because the prior contractual relation will facilitate post-breach negotiations. Moreover, a change in remedy should affect only the content of the agreement and not the frequency with which the post-breach negotiations succeed. Second, he contends that specific performance

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84. Ulen, supra note 78, at 369, 379-82. The reference is to Calabresi & Melamed, Property Rules, Liability Rules, and Inalienability: One View of the Cathedral, 85 HARV. L. REV. 1089 (1972). See also supra note 79.

85. Ulen, supra note 78, at 379-94 (including an interesting discussion of the problem of mitigating...
is less costly to administer than expectation damages.\textsuperscript{86} He contends that administration costs will drop because fewer cases will arrive in court under specific performance, and because over time contracts will provide terms that facilitate the application of the specific performance remedy. Both these claims are empirical and highly controversial.

3. The Quality of the Cover Market and Efficiency

The quality of the cover market determines the ease with which a court may accurately estimate the expectation of the promisee. If courts systematically err in the estimation of expectancies, inefficient levels of breach may arise. As suggested above, if the court underestimates the expectancy, a party will tend to breach too often, while if it overestimates the expectancy breach will occur too infrequently. Both Shavell and Bishop argue that the likely bias in estimation of the expectancy varies with the nature of the contract.

Shavell introduced a distinction between production contracts and contracts to transfer possession. In a production contract, the seller manufactures a custom designed good for the buyer. At the time of execution, the cost of production is uncertain. Thus, the seller may breach because the realized production cost is too high. Since the subject matter of a contract for transfer of possession already exists,\textsuperscript{87} seller's breach in a transfer contract results from the arrival of second buyer who offers a higher price.

Recall our discussion in section E. 7. of the consequences of inaccuracies in the judicial determination of damages. There we considered those non-performances induced by the arrival of a third party willing to pay the seller a higher price. We concluded that, if third-party offers were equally available to promisees as to sellers and if courts misestimate the promisee's expectation, then specific performance will be a more efficient remedy than expectation damages. One might believe, however, as Bishop argues,\textsuperscript{88} that markets differ in the facility with which potential buyers may locate alternative buyers. Consequently, one would conclude that the optimal remedy depends on the market.

In fact, Bishop argues strongly that the optimal remedy depends critically on a variety of factors. Two of these factors are of particular

\textsuperscript{86} Ulen, supra note 78, at 371-9.

\textsuperscript{87} Many contracts are both production contracts and contracts for possession, in which case both causes of breach are possible. In the purest production contract, the custom-designed good has no value to anyone except the buyer.

\textsuperscript{88} Bishop supra note 70, at 301.
interest. First, Bishop contends that the economics of buyer's breach may differ qualitatively from the analysis of seller's breach. Bishop's argument concerning the asymmetry between buyer's and seller's remedies focuses on production contracts. In production contracts the good is, virtually by definition, unique. Thus, no cover market exists and any bias towards underestimating the seller's expectancy argues for the use of specific performance as a remedy.

Second, he considers the effect of uniqueness on the buyer's use of the product. This second factor again raises the problems of the direction of bias in judicial estimation of the expectancy and of the quality of the cover market. If the cover market is adequate, allowing the buyer to purchase in that market satisfies his expectancy. If the cover market is inadequate, then an expectation measure of damages will lead to inefficient results if the court makes systematic errors.

4. Specific Performance, Post-Breach Negotiation and Efficiency

Our analysis in section E. 6. implies that a specific performance remedy will induce efficient behavior only if post-breach negotiations are possible. If none are available and the promisee's sole remedy is specific performance, then performance may occur when neither party would, in ex ante negotiation, have wanted it. To use the example of section E. 2., the promisee might compel performance when the cost $c$ to the promisor exceeds the value $v$ to her. If ex post negotiation is available, the parties will agree that performance should occur only when it is efficient to do so, but the rule of specific performance will allocate the loss between the parties differently than expectation damages. For example, if specific performance is available to the promisee, she may be able to persuade the promisor to transfer some of the difference $c - v$ to her; the promisor is still better off paying an amount greater than $v$ but less than $c$ to the promisee than he would be performing. At first this outcome may seem objectionable on fairness grounds, but other examples may yield different reactions. Consider a situation in which the promisor has agreed to deliver an already existing good, say a rare book. He is induced to breach by the appearance of a third party who values the book more highly than the promisee (say at $v^*$) and, hence, offers him a higher price. If the promisee is limited to expectation damages, the promisor receives the entire benefit of the fortuitous arrival of the third party. Under specific per-

89. Id. at 302-4.
90. Id. at 314-7.
91. See section F.4. below.
formance the promisee can claim all or part of this benefit in two ways. First, the promisee might elect specific performance and then resell to the third party at the higher price. Second, she might, in post-breach negotiations with the promisor, demand some excess of \( v^* \) over \( v \) as a price for her releasing the promisor from the contract. While allocating the entire benefit to the promisee may not be the fairest outcome, there seems nothing to recommend allocating it all, as expectation damages does, to the breaching party.\(^{92}\)

Neither Kronman nor Schwartz considers the use of a rule of specific performance in a world more complex than the simple world with which the analyses of damage measures began. It is easy to see that much of the discussion of risk aversion will carry over to the case of specific performance because specific performance assures full compensation and thereby assigns all risks to the breaching party. Similarly, the analysis of reliance applied in the damages case can be extended to specific performance. Since specific performance assures compensation, it does at least as well as expectation damages in inducing appropriate reliance because the promisee has less incentive to increase the promisor's potential liability for breach.

Ulen, however, argues that specific performance will induce more efficient contract formation and contract drafting.\(^{93}\) He contends that contract formation will be more efficient because costs of contract negotiation will fall. His argument for this proposition seems circular. Costs will fall, he claims, because parties will not have to contract around the inefficient specification of expectation damages as the general remedy for breach. But this argument assumes what must be proven. If we interpret Ulen as claiming that, in general, parties would prefer specific performance to expectation damages, his argument avoids circularity, but it relies on a controversial empirical assumption. It seems more plausible to believe that most contracts involve fungible goods for which cover markets perform very well. While it may be true that negotiating away from expectation damages to some form of specific performance is more difficult than negotiating away from specific performance to a cover remedy, the number of contracts for which specific performance will be ideal may be sufficiently small for the benefits to be overwhelmed.\(^{94}\)

\(^{92}\) In particular, no incentive or efficiency argument favors allocation of the benefit to the seller. While it is true that awarding the entire surplus to the seller provides an incentive to seek out third parties, awarding the entire surplus to the promisee would provide an equivalent incentive to her.

\(^{93}\) Ulen, supra note 78, at 371-79.

\(^{94}\) Ulen also argues for allowing the parties complete freedom to specify their own remedy. That is, he would permit both penalty clauses and clauses that required specific performance. This change in rules would probably increase the efficiency of contract formation, but it would do so regardless of the
G. Foreseeability and the doctrine of Hadley v. Baxendale

In section E, the analysis assumed implicitly that both parties to the contract knew what damage would be caused by non-performance. This assumption played a crucial role. The ability of a damage rule to induce the seller to perform when the cost of performance is less than the value of performance to the buyer depends on the accuracy with which the damage measure communicates to the seller the costs that breach imposes on the buyer. The argument for the efficiency of expectation damages assumed that the buyer would receive her value of performance and that the seller, when he decided whether to perform, accurately perceived the amount of damage he would be required to pay. This condition of accurate perception is not always met. Sometimes the buyer has knowledge about the costs to her of non-performance that may not be readily available to the seller; in particular, some costs may not be communicated through the cover market.

The legal doctrine of Hadley v. Baxendale confronts precisely this problem of asymmetric information between buyer and seller as to the costs of non-performance. Economists interpret "foreseeable damages" as damages that a potential non-performer knows of (or should know of) and unforeseeable damages as those damages knowledge of which is not assumed, because its discovery by a promisor would incur exorbitant costs. The economic analysis of this doctrine has two prongs.

1. Hadley Encourages Parties to Discover and to Disclose the Costs of Non-Performance

First, economic analysis argues that the law should provide the appropriate incentives to both parties to discover and to disclose the relevant information about the costs of non-performance.\(^{95}\) Thus, the classification of some damages as "foreseeable" should imply that information about the nature and approximate amount of such damages was easily (perhaps more precisely "cheaply") available to the promisor, while the classification of other damages as "unforeseeable" should imply that the promisee could more cheaply provide the information to the promisor (or, in the alternative, more cheaply bear the risk of the unknown). Thus, one purpose of the rule of Hadley v. Baxendale is to encourage the parties to communicate all relevant infor-

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95. This economically self-evident proposition is articulated in, for instance, R. Posner, Economic Analysis of Law at 94 (2d. ed. 1977).
mation to each other. If the promisee may more cheaply determine
the cost of a particular element of damages, the duty to discover and
reveal that cost should be placed on her.96

2. Efficiency of the Hadley Rule of Foreseeability

Second, economic analysis endeavors to identify the legal rule
that induces the most "efficient" outcome in the sense that appropriate
performance decisions would be made.97 For purposes of analysis, as-
sume a market somewhat simpler than the one that introduced section
E. Here, both sellers and buyers can foresee that a certain percentage
of the output will prove defective. Buyers differ among themselves as
to the costs imposed by shortfalls in output, so the seller can only
assume that he is dealing with an average buyer and set the price ac-
cordingly. True "foreseeability" would imply that the seller knows
the costs of shortfalls to the particular buyer. As one expects, if, in
this simple world, buyers and sellers are risk-neutral, the rule of fore-
seeability is efficient98 while a rule that allows unforeseeable damages
yields inefficient outcomes. The rule allowing unforeseen damages
fails because the price for the good rests on the costs imposed on the
average buyer and not on the costs of the actual buyer. Thus, when
buyers with above average costs contract, they will not reveal the true
costs imposed on them by shortfalls, and sellers will act as if the costs
were lower than they actually are. Once again we apply the economic
insight that optimal decisions will only be made if a decisionmaker
must take into account the full consequences of her decision.

The only other case analyzed is the case of risk-averse actors.
Here, the rule of Hadley v. Baxendale performs well relative to other
rules that might be announced (that is, it results in less inefficiency),
but it may not prove fully efficient. Again, the intuition underlying
these conclusions rests on the extent to which different damage meas-
ures accurately reflect the consequences of breach to the promisor. As
in section E. 5., risk aversion implies that the parties to the contract
care not only about the monetary costs imposed by non-performance
but also about variations in their wealth, that is, about risk. Since an
"optimal" rule would divide the risk between the parties according to
their relative aversion to risk, the simple damage rules used by courts,
which are independent of the attitudes towards risk of the particular
parties before the court, cannot be completely efficient.

96. The analysis in Kronman, supra note 36, is along the lines suggested in the text but applied to
the doctrine of mistake.

97. The text follows Perloff, Breach of Contract and the Foreseeability Doctrine of Hadley v. Bax-

98. A rule of no damages is also efficient since the price will adjust accordingly.
H. Liquidated Damage Clauses

The judicial attitude towards contract clauses that specify the amount to be paid in the event of breach is one of the few areas of contract law that has received generally adverse criticism from economic analysts. The traditional rule against the enforcement of "penalty" clauses runs strongly counter to the elaboration of the efficiency criterion, particularly in commercial contexts.

Several reasons account for the economists' antagonism. First, the assumption of rationality entails that a party will not accept a clause for which he is inadequately compensated. When the promisee demands a "penalty clause," the promisor will agree only if the price is increased sufficiently to cover any increase in the cost of performance. Thus, if parties are "rational," no contract should require performance when the (expected) costs to party A of performing exceed the (expected) benefits to party B of receiving it. Of course, the parties may have different expectations as to the likelihood of some contingency occurring, and one may be more accurate than the other. Moreover, the occurrence of the contingency may impose some inequality of costs and benefits between the parties. But, since it seems plausible that commercial contractors act largely in their "rational" self-interest, it is likely that both parties initially saw a benefit even in a clause which a court later terms a penalty. This benefit might simply be to trade a risk that one party perceives as high to a second party who perceives it as low. Such trades may be "efficient" because trading the risk may be cheaper for the first party than correcting or improving his estimate of the risk to which he was exposed. In that event, judicial intervention after the fact would only serve to induce excessively costly gathering of information. Alternatively, the benefits to the parties may be more "substantial" than those arising from different perceptions. For instance, a new entrant into a market may be willing to accept a clause imposing a penalty in the event his product fails to meet some quality standard precisely because he has no other means of credibly assuring quality and thereby successfully entering the market.

damage clauses lies in the informational advantage that the parties themselves are presumed to have; at the time of contracting the parties are likely to have better information about any idiosyncratic damages that might be incurred than a court will have at or after the time of breach. Particularly in markets where substitute performance is difficult to obtain, this informational advantage argues strongly for liberal enforcement of liquidated damage clauses. An analogous argument derives from the widespread belief that expectation damages are in fact undercompensatory. If the law seeks to promote efficient decisions to perform or not, then allowing parties to estimate damages in advance will induce more appropriate decisions in this respect than court-imposed rules.

A third problem with the current proscription of "penalty" clauses lies in its implicit distributional bias; it forces the parties to allocate some risks in a particular way. Suppose the breach is caused by the appearance of a third party willing to pay more for the good than the first buyer agreed to pay. The ban on penalties (together with a rule of expectation damages) effectively allocates the entire gain from the appearance of the third party to the seller, while the parties might rationally have wished to divide this risk differently. On the other hand, if the breach is prompted by an uneconomic increase in costs, expectation damages allocates all of the loss to the breaching party, while contractors, negotiating before the breach, might knowingly have chosen to share this risk differently.

These arguments suggest that the current rules governing liquidated damage clauses are too restrictive. They do not necessarily contend that every liquidation clause, whether it appears to be a "penalty" or not, should be permitted. Most commentators would make exceptions for clauses that resulted from defective bargaining procedures (akin to those covered by unconscionability). These defects, however, seem unlikely to occur in commercial contexts, where one can presume that the parties are sophisticated and rational in their negotiations. Other commentators suggest that liquidated damage clauses be policed for more than fraud or oppression in bargaining. In some circumstances, a clause which unduly benefitted one party might stimulate it to induce a breach by the other; in that case, these commentators suggest the clause should not be enforced. 100

100. See, e.g., Clarkson, Miller & Muris, supra note 4, at 377.
I. Mitigation of Damages

In our discussion of the rule of Hadley v. Baxendale we saw that one function of legal rules governing remedy might be to encourage parties to discover and to reveal relevant information about the costs of non-performance to the other party. This insight provides coherence and justification to rules governing mitigation of damages. Mitigation rules also stress another aspect of contract behavior for which the remedial rules must account but to which the prior analyses have not attended. Contract performance extends over time; during that period each party may acquire information or opportunities relevant to the other. For instance, the actual cost of performance may become known with greater certainty than at the time of contracting; or the position of the promisee may change in such a way that suggests some modification in contractual performance. The mitigation rules play a role in coordinating action over time.

Economic analysis suggests that the purpose of mitigation rules is to provide both parties the appropriate incentives to reveal information about changed circumstances and to act to minimize the costs of performing the contract given the changed circumstances. Two factors complicate this argument: the ability to renegotiate the contract as performance progresses and the "thickness" of substitute markets for performance.

If the parties could costlessly renegotiate the terms of the contract as performance proceeded, there would be little need for mitigation rules. Each time an untoward contingency arose, the parties would, in light of the rule of damages, decide what course of action to take. Since costless renegotiation implies that parties will make efficient breach decisions, any distributional questions could be settled by

101. The discussion in this section relies heavily on Goetz & Scott, supra note 4. As in previous sections, I ignore most of the complexities that Goetz and Scott carefully analyze.  
102. See section G.  
103. Wittman, Optimal Pricing of Sequential Inputs: Last Clear Chance, Mitigation of Damages and Related Doctrines in the Law, 10 J. LEGAL STUD. 65 (1981), provided the earliest economic discussion of the sequential aspects of the contracting problem.

It should be noted that a rudimentary time structure has already been imposed on the contracting process. Prior sections have considered a process in which at time 0 the parties enter a contract; at time 1 the promisee chooses a level of reliance; at time 2 some random event occurs affecting the costs or benefits of performance to the promisor; at time 3 the promisor chooses whether to perform or not; at time 4 the parties have (a costly) opportunity to renegotiate. This time structure ignores several important problems. First, it ignores the problem, noted above, of changed circumstances and the opportunities for communication about such changes between the parties. Second, it ignores the possibility that one or more parties may have the opportunity to influence the costs of performing the contract. Thus, whether a contract is worth performing might depend upon the behavior of one of the parties. This problem is called "moral hazard."  
104. See section E. 6.
the choice of the damage measure. Indeed, we may extend this argument further: if the costs of renegotiation during performance were less than the costs of initial negotiations, drafting and other negotiation costs would be minimized when the parties waited until the contingency arose to determine the contract terms. Economic analysis would apparently suggest that, when renegotiation is less expensive than initial negotiations, it be substituted for mitigation rules.

Costless negotiation, though, does not imply that parties will not act opportunistically during renegotiations. It is this possibility of opportunistic behavior that occasions a need for mitigation rules. Whether a party chooses to breach depends on the relative costs of performance and non-performance.\(^\text{105}\) In the absence of mitigation rules, the promisee can, during ex post negotiations, threaten to "run up" her damages. This threat might allow her to capture most of the difference between the costs of non-performance and performance.\(^\text{106}\)

**Conclusion**

The foregoing discussion should provide some sense of the power and subtlety of the economic analysis of contract remedies. The initial, stark model that considered transactions much simpler than those that occasion judicial concern expanded to include more complex transactions and markets. Current discussions consider the importance of the time structure of the transaction for the legal rules as well

\(^{105}\) See section E. 2.

\(^{106}\) WILLIAMSON, MARKETS AND HIERARCHIES (1975), and Macneil, Contracts: Adjustment of Long-Term Economic Relations Under Classical, Neoclassical, and Relational Contract Law, 72 NW. U. L. REV. 854 (1978), deal extensively with opportunistic behavior.

The position of the parties relative to one another changes as the performance of the contract progresses. This change in relative position may alter the costs of renegotiation (possibly even increase them) but, more significantly, it may place one party at the mercy of the other in renegotiation. For example, to perform a contract to provide specialized goods to a buyer, the seller may have to make investments specific to the contract, investments that may have no value in other uses. After the seller has committed himself to these investments, the buyer wields extra power in a renegotiation. The threat to cancel the contract may impose large costs on the seller though circumstances have changed in a manner that failure to deliver does not harm the buyer much. Of course, circumstances might also change so that the value of timely performance to the buyer increases dramatically and the lead time necessary to produce the specialized goods would place the buyer in a weakened position in renegotiation. Under this interpretation, the mitigation rules serve to maintain the balance of exchange embodied in the initial contract, as well as to provide incentives to the party to cooperate in minimizing the costs of performance.

The extent to which bargaining power shifts as contract performance occurs depends in part on the adequacy of substitute markets. In the example of the previous paragraph, the seller suffered because of the absence of a substitute use or market for his contract-specific investment. Similarly, the pressure on the buyer derives from the inability to cover in a timely fashion. In a well-developed market the buyer could avoid these difficulties. For example, while wheat has a long lead time in production, a miller who has contracted with a farmer for delivery is not at the mercy of that farmer because substantial spot and forward markets for the delivery of wheat allow the miller to cover.
as attitudes towards risk and the nature of the market. The insights of that simple model, however, extend to the more complicated worlds with which courts and later models deal. A sound analysis begins by identifying the decisions that the rule of law will affect by considering the incentives it creates on the parties to perform, to rely, and to reveal or search for information about costs and contingencies. If the law of contract seeks to promote efficient conduct, a goal that is surely plausible in the context of commercial contracts, then rules should be selected that reveal to the decisionmaker the full consequences of her decisions.

The analysis of contract remedy has uses beyond informing the choice of legal rule. The concerns it identifies should inform the contract drafter as well. The economic analysis stresses the incentives that contract remedies and contract clauses place on parties. What may not be induced by contract remedy may be induced through contract drafting. Such incentive mechanisms as bonding and installments coupled with price incentives may provide parties to a contract with appropriate incentives to rely, to perform, and to exchange information.

One must remember, however, that these models, sophisticated as they may have become, still differ in important ways from the world which contract law regulates. Translation from the model's conclusions to policymaking therefore requires care and thought. Perhaps most dramatically, the economic models offer a stark description of the measures of damages as an amount $d$. Courts, of course, use a multitude of different formulas to calculate that $d$ so casually inserted into the model. The variety of damage measures arises for a number of different reasons. First, expectation damages, as conceived within the economic analysis of contract remedy, represents the difference between the promisee's subjective valuation of the promised performance and his valuation of what he received. While this difference is conceptually clear, it is not directly observable. Actual damage measures seek to estimate this theoretical construct.\textsuperscript{107}

Second, the proliferation of different damage measures suggests further variations across markets that have not yet been addressed by the economic analysis. Much of the economic analysis, for example, has assumed competitive markets. Some scholars, however, have suggested that the appropriate measure of damages should vary with the

market structures. Other aspects of contractual relations have undoubtedly also received insufficient attention. One group of critics of the economic analysis of contract remedies has underscored the complexity of long-term contractual relations which has not yet been reflected in the economic models.

Finally, much of the analysis above has identified which remedy would prove efficient where efficiency is measured relative to certain decisions. Contract law may have distributional aims or ethical aims distinct from efficiency which vitiate the conclusions drawn. The existence of non-efficiency objectives does not, however, eliminate the need for economic analysis of contract remedies. For most legal goals consider, at least in part, the behavior that the legal rules induce in actors. Any consequentialist goal therefore requires policy makers to predict the behavior that will result from various legal rules. The analyses of contract remedies outlined above must lie at the foundation of any such predictions of behavior.

108. E.g., Goetz & Scott, supra note 52 (arguing that the expectation interest overdeters contract formation in non-competitive markets); Cooter & Eisenberg, supra note 107.
