IMPOSSIBILITY AND RELATED DOCTRINES IN CONTRACT LAW: AN ECONOMIC ANALYSIS*

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ORDINARILY the failure of one party to a contract to fulfill the performance required of him constitutes a breach of contract for which he is liable in damages to the other party. But sometimes the failure to perform is excused and the contract is said to be discharged rather than breached. This study uses economic theory to investigate three closely related doctrines in the law of contracts that operate to discharge a contract: "impossibility," "impracticability," and "frustration." These are not the only excuses for nonperformance of a contract. Among other excuses, not discussed in this study, is the closely related doctrine of mutual mistake (sometimes called "antecedent impossibility"). Also related, and only incidentally discussed herein, is the doctrine of *Hadley v. Baxendale*[1] limiting the liability of the breaching party to the foreseeable damages of the breach.

There is an extensive legal literature on the set of doctrines that, for want of a more inclusive term, we shall sometimes lump together under the name "impossibility." The main conclusions of this literature are summarized in Part IA, next, while Part IB analyzes the subject from the standpoint of economics.[2] Part II applies the economic analysis to the leading cases and

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1 9 Ex. 341, 156 Eng. Rep. 145 (1854).

2 The subject has received relatively little attention from economic analysts. An early, but unsatisfactory, treatment is Robert L. Birmingham, A Second Look at the Suez Canal Cases: Excuse for Nonperformance of Contractual Obligations in the Light of Economic Theory, 20 Hastings L.J. 1393 (1969); see notes 15-16 *infra*, and accompanying text. Richard A. Posner, Economic Analysis of Law 49-50 (1973), discusses the economics of impossibility briefly.

recurrent situations in which the doctrine has been applied. Part III considers the remedial consequences of application of the doctrine. Our major conclusion is that the doctrine—in its typical, not its every, application—exemplifies the implicit economic logic of the common law.[3]

I. Impossibility and Related Doctrines: Basic Principles

A. *As Perceived in Conventional Legal Scholarship*

Conventional legal scholars who have dealt with the discharge cases have indicated a pervasive dissatisfaction with the prevailing doctrinal articulations.[4] Their uneasiness may reflect an inability to develop a coherent positive theory consistent with the typical outcomes in the recurring cases, and may be responsible for the tendency of courts and commentators alike to treat the field as too broad and diverse to be adequately understood within a single theoretical framework.[5] Thus, in an effort to make descriptive treat-

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Stephen S. Ashley, The Economic Implications of the Doctrine of Impossibility, 26 Hastings L.J. 1251 (1975), is a longer treatment, but the discussion of economic principles and their applications does not go beyond Posner (see *id.* at 1272-73), the author's main emphasis being on the costs of vague contract doctrines. Paul L. Joskow, Commercial Impossibility, the Uranium Market and the Westinghouse Case, 6 J. Leg. Studies 119 (1977), which came to our attention after our own study was largely completed, is an excellent economic case study. But Joskow's discussion ot the economic principles underlying the impossibility doctrine is quite limited, while his application of those principles to the law is largely confined to section 2-615 of the Uniform Commercial Code (discussed pp. 108-10 *infra*).

On the broader subject of the economics of risk shifting (which, as we shall see, is central to an understanding of the impossibility doctrine) there is of course an extensive literature. See, *e.g.*, Jack Hirshleifer, Investment, Interest, and Capital (1970). However, its emphasis is on capital-market adjustments, formal insurance contracts, and explicit forward contracts as methods of risk shifting, and it ignores contract law as a possible such method. As a result, this literature has only limited relevance to our subject. An older institutional literature on risk shifting also seems to have ignored risk-shifting provisions in contracts other than formal insurance contracts. See Charles O. Hardy, Risk and Risk-Bearing (rev. ed. 1931). The only study of which we are aware of the noninsurance contract as a device for shifting risk (other than the impossibility studies cited earlier in this footnote) is Cheung's study of share tenancy, cited at note 105 *infra*.

[3] See Richard A. Posner, *supra* note 2, at pt. 1.

[4] See Robert L. Birmingham, *supra* note 2; John Henry Schlegel, Of Nuts, and Ships, and Sealing Wax, Suez, and Frustrating Things—The Doctrine of Impossibility of Performance, 23 Rutgers L. Rev. 419 (1969); Comment, Temporary Impossibility of Performance of Contract, 47 Va. L. Rev. 798 (1961); Malcolm P. Sharp, Promisory Liability II, 7 U. Chi. L. Rev. 250 (1940); Comment, Quasi-Contract—Impossibility of Performance—Restitution of Money Paid or Benefits Conferred Where Further Performance Has Been Excused, 46 Mich. L. Rev. 401 (1948); and J. Denson Smith, Some Practical Aspects of the Doctrine of Impossibility, 32 Ill. L. Rev. 672 (1938). See also references in note 6 *infra*.

[5] The problem has been described as one that "calls for special treatment of a type not yet fully developed by the courts. It is a field of relatively recent recognition in which the factors to be considered have not yet been fully charted." Comment, 46 Mich. L. Rev., *supra* note 4 at 403. Consider also the statement that "[t]he conclusions reached in the decided cases are not

ment of the case law more manageable, the subject has been subdivided. The principal subdivisions are "impossibility of performance," "frustration of purpose," and "extreme impracticability," and each is thought to merit separate analytical treatment.[6] "Impossibility" is the rubric used when the carrying out of a promise is no longer "physically possible,"[7] and "frustration of purpose" when performance of the promise is physically possible but the underlying purpose of the bargain is no longer attainable.[8] Impracticabil-

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harmonious, due, perhaps in part, to the multitude of circumstances or conditions under which the question was presented. It is impossible to state a general rule which will be applicable to all classes of cases." Housing Authority v. East Tennessee Light & Power Co., 183 Va. 64, 72, 31 S.E. 2d 273, 276 (1944).

[6] "There will be found in common use such terms as physical impossibility, legal impossibility, impracticability, subjective and objective impossibility, personal inability, increased difficulty, and frustration of object. These express varying concepts; and the applicable rules of law are not uniform." 6 Arthur Linton, Contracts § 1325 (1962). See also 6 Samuel Williston, Contracts § 1935 (rev. ed. 1938). There is a tendency to treat impracticability as a subset of impossibility while continuing to treat frustration as a distinct field. Compare Restatement of Contracts §§ 288, 454 (1932). In the words of Justice Traynor: "Although the doctrine of frustration is akin to the doctrine of impossibility of performance since both have developed from the commercial necessity of excusing performance in cases of extreme hardship, frustration is not a form of impossibility even under the modern definition of that term, which includes not only cases of physical impossibility but also cases of extreme impracticability of performance." Lloyd v. Murphy, 25 Cal. 2d 48, 53, 153 P.2d 47, 50 (1944) (citations omitted). See also Arthur Anderson, Frustration of Contract—A Rejected Doctrine, 3 DePaul L. Rev. 1 (1953).

[7] See 6 Samuel Williston, *supra* note 6, at §§ 1931-1979; 6 Arthur Linton Corbin, *supra* note 6, at §§ 1320-1372; and Restatement of Contracts § 454 (1932). The leading case is Taylor v. Caldwell, 3 B. & S. 826, 122 Eng. Rep. 309 (1863), in which a contract for a musical performance in a specified auditorium was discharged on grounds of impossibility when the music hall was destroyed by fire. Similar American cases include Siegel v. Eaton & Prince Co., 165 Ill. 550, 46 N.E. 449 (1896) (discussed *infra* pp. 105-06), in which a contract calling for the manufacture of an elevator and its installation in a department store was discharged on grounds of impossibility when the store was destroyed by fire. See also, for example, Texas Co. v. Hogarth Shipping Co., 256 U.S. 619 (1921); and Emerich Co. v. Siegal, Cooper & Co., 237 Ill. 610, 86 N.E. 1104 (1908). These cases illustrate one prominent group of impossibility decisions, in which the continued existence of some material thing is considered essential; if the thing ceases to exist, performance is then said to be impossible. The other principal group of impossibility cases involves contracts discharged because of supervening illegality. The courts thus treat what is illegal as impossible, illustrating great judicial respect for the law but a disregard for normal uses of language. See, for example, Columbus Ry. Power & Light Co. v. City of Columbus, 249 U.S. 399 (1919); Stamey v. State Highway Comm'n of Kansas, 76 F. Supp. 946 (D. Kan. 1948); and Phelps v. School District, 302 Ill. 193, 134 N.E. 312 (1922) (discussed *infra* p. 101).

[8] See 6 Arthur Linton Corbin, *supra* note 6, at §§ 1353-1361; Restatement of Contracts § 288 (1932). The case law develops from the "coronation cases," for example, Krell v. Henry, [1903] 2 K.B. 740 (C.A.). See R. G. McElroy & Glanville Williams. The Coronation Cases, I, 4 Mod. L. Rev. 241 (1941). In each of these cases, an apartment was rented to view the coronation procession of Edward VII. The procession was cancelled due to Edward's illness and discharge was sought on the ground that the underlying purpose (the viewing of the procession) had been frustrated. For further discussion of these cases see text at notes 93-94, 108 *infra*. And for similar American cases see, for example, La Cumbre Golf & Country Club v. Santa Barbara

ity—a catch-all for any discharge case that does not fit snugly into either the impossibility or the frustration pigeonhole—is the term used when performance of the promise is physically possible and the underlying purpose of the bargain achievable but as a result of an unexpected event enforcement of the promise would entail a much higher cost than originally contemplated.[9]

This categorization is unhelpful. It is true that some contracts could be performed only at infinite cost, and these, though rare (Professor Corbin's use of a promise to supply a trip to the moon to illustrate impossibility showed a certain want of imagination),[10] are cases of true physical impossibility. But whether the cost is infinite, or merely prohibitive relative to the gains from performance (as in the impracticability and frustration cases), is a distinction without relevance to the purposes of contracts or contract law. There is thus no functional distinction between impossibility and frustration cases on the one hand and impracticability cases on the other.[11] In every discharge case the basic problem is the same: to decide who should bear the loss resulting from an event that has rendered performance by one party uneconomical.

The fragmentation of the discharge issue into arbitrary subtopics has had serious consequences. When a discharge case is litigated, there is much discussion of its appropriate place within the typology just described. Since the typology is empty, this amounts to an investigation of distinctions without differences and has led legal scholars to despair of generalizing fruitfully about the discharge problem. One commentator has argued that the outcomes in discharge cases are best described as being based on the equities of

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Hotel Co., 205 Cal. 422, 271 P. 476 (1928); and Alfred Marks Realty Co. v. Hotel Hermitage Co., 170 App. Div. 484, 156 N.Y.S. 179 (1915).

[9] See 6 Arthur Linton Corbin, *supra* note 6, at § 1325; and 6 Samuel Williston, *supra* note 6, at § 1935. The early impracticability cases stressed that when performance became sufficiently difficult or costly, it could be treated as impossibile. See Restatement of Contracts § 454 (1932). Thus in Mineral Park Land Co. v. Howard, 172 Cal. 289, 156 P. 458 (1916), a contractor agreed to haul from the plaintiff's land all of the gravel necessary for the construction of a concrete bridge. The contractor took all of the immediately available gravel from plaintiff's land but purchased on the open market about half of the amount necessary to complete the project. He claimed that all of the additional gravel in plaintiff's land was below water and its extraction would have required the use of extremely expensive techniques. The Supreme Court of California held the contract discharged on the ground that, "[a]lthough there was gravel on the land, it was so situated that the defendants could not take it by ordinary means, nor except at a prohibitive cost. To all fair intents then, it was impossible for defendants to take it." 172 Cal. 293, 156 P. 459-60. However, the courts have been unable to articulate a standard as to what magnitude of cost change is necessary to justify discharge on grounds of impracticability, except to say that "mere hardship is not enough." See, for example, Wischhusen v. American Medicinal Spirits Co., 163 Md. 565, 163 A. 685 (1933); Piaggio v. Somerville, 119 Miss. 6, 80 So. 342 (1919); and Browne & Bryan Lumber Co. v. Toney, 188 Miss. 71, 194 So. 296 (1940). See also Kronprinzessin Cecilie, 244 U.S. 12 (1917); Comment, 4 Calif. L. Rev. 407 (1916).

[10] 6 Arthur Linton Corbin, *supra* note 6, at § 1325. It makes little sense to speak of an event being impossible until it is first accomplished, and possible thereafter.

[11] See J. Denson Smith, *supra* note 4; and Comment, 46 Mich. L. Rev., *supra* note 4, at 401.

the particular case,[12] another that "the decision as to whether the promise is to be enforced must rest in the end on considerations of policy and expediency,"[13] another that "fairness is arguably the foundation of all relief."[14]

Two currents of thought can be discerned in the legal literature on impossibility and related doctrines. One group of scholars argues that a broad and undefined judicial discretion, the result of such amorphous, ad hoc concepts as fairness, equity, and justice, is all that is required to handle the discharge issue adequately. Those who hold this view see their role as quantifying, or at least clarifying, the losses that result from an unexpected event so that the court can apportion them between the parties.[15] This might be termed a distributive approach to discharge.

The other group believes that the variance of the case outcomes results from the courts' lack of a consistent approach. These commentators argue for a doctrinal change of some sort, some urging greater restraint,[16] others greater liberality,[17] in allowing discharge. The proposals are complex, arbitrary, at times almost incomprehensible.[18]

In short, one group of commentators argues essentially that no general theory is possible, and hence concurs with whatever decisions the courts reach. The other group also fails to develop a systematic theory but believes that the current judicial doctrines and outcomes are inconsistent.

There is also in the literature some recognition that the problem of discharge is one of allocating risk, since the effect of granting discharge is to place the risk of the event preventing performance on the promisee, while the effect of denying discharge is to place it on the promisor.[19] But thus far

[12] See J. Denson Smith, *supra* note 4, at 675.

[13] Comment, 46 Mich. L. Rev., *supra* note 4 at 408. The considerations are not specified.

[14] Robert L. Birmingham, *supra* note 4, at 1396.

[15] "Since frustration remedies can in many cases be applied or withheld with almost equal justification, they permit the judge some freedom in allocating gain or loss between contracting parties. Their principal redistributive function should not be concealed behind bland assertions that interpretation of documents is necessarily a search for true meaning rather than an exercise of judicial discretion." Robert L. Birmingham, *supra* note 2, at 1397.

[16] See, for example, Stephen S. Ashley, *supra* note 2; Harold J. Berman, Excuse for Nonperformance in the Light of Contract Practices in International Trade, 63 Colum. L. Rev. 1413 (1963).

[17] See, for example, John Henry Schlegel, *supra* note 4; and Malcolm P. Sharp, *supra* note 4.

[18] "I would like to suggest that, where an unusual event occurs and frustration is alleged, contracts should be enforced only when the contract in question is essentially similar to the archetypical contract situation: [. . . a] contract between brokers, each essentially speculating on a narrowly fluctuating market . . . . Thus, an event shall be held frustrating when it is not one within that narrow range of events normally incidental to the average broker's or wholesaler's contract—slight delay and small market fluctuations." John Henry Schlegel, *supra* note 4, at 447.

[19] See especially 6 Arthur Linton Corbin, *supra* note 6; John Murray, Jr., Contracts §§ 197-205 (1974); and above all Edwin W. Patterson, The Apportionment of Business Risks Through Legal Devices, 24 Colum. L. Rev. 335, 348-53 (1924).

the insight has been a sterile one because of a failure to develop any criteria for assigning the risk to one party or the other. Corbin is typical in suggesting both that it is a matter of indifference who bears the risk[20] and that risk allocation is arbitrary: "Where neither custom nor agreement determines the allocation of risk, the court must exercise its equity powers and pray for the wisdom of Solomon."[21]

We shall try to give content to the concept of risk allocation as applied to the discharge question, first by sketching a theoretical framework that demonstrates why and when it is economically sensible to discharge a contract because of some unexpected event, and then by subjecting the theory to preliminary verification by comparing its implications with prevailing doctrinal positions and typical case holdings.

B. *Economic Principles*

1. *Of contract law in general.*[22] The process by which goods and services are shifted into their most valuable uses is one of voluntary exchange. The distinctive problems of contract law arise when the agreed-upon exchange does not take place instantaneously (for example, A agrees to build a house for B and construction will take several months). The fact that performance is to extend into the future introduces uncertainty, which in turn creates risks. A fundamental purpose of contracts is to allocate these risks between the parties to the exchange.

One purpose of contract *law,* but not a particularly interesting one here, is to assure compliance with the allocation of risks that the parties have agreed upon (that is, to prevent bad faith). A second purpose, central to our subject, is to reduce the costs of contract negotiation by supplying contract terms that the parties would probably have adopted explicitly had they negotiated over them. This purpose has been understood since Bentham's day:

> . . . [O]bligations may be distinguished into original and adjective. I call those original, of which express mention is made in the contract itself: I call those adjective, which the law thinks proper to add to the first. The first turn upon events which the contracting parties have foreseen; the others upon events which they could not foresee.
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> It is thus that in every country the law has supplied [?] the shortsightedness of individuals, by doing for them what they would have done for themselves, if their imagination had anticipated the march of nature.[23]

[20] See 6 Arthur Linton Corbin, *supra* note 6, at 344.

[21] *Id.* at 371-72.

[22] See Richard A. Posner, *supra* note 2, at 41-65.

[23] Jeremy Bentham, A General View of a Complete Code of Laws, in 3 The Works of Jeremy Bentham 157, 191 (John Bowring ed. 1843).

This function of contract *law* is analogous to that performed by standard or form *contracts*. The form contract economizes on the costs of contract negotiation by providing a set of terms to govern in the absence of explicit negotiations. The parties can of course vary the terms of the form contract, but to the extent that they do not, finding the terms suitable for their needs, contracting costs are reduced. It is much the same with the law of contracts. Judicial decisions, the Uniform Commercial Code, and other sources of contract law operate to define the parties' contractual obligations in the absence of express provisions in the contract. Every contract automatically incorporates a host of (generally) appropriate terms, over which the parties do not have to negotiate explicitly unless they want to vary the standard terms supplied by the law. Incidentally, the role of contract law in supplying contract terms, like the role of the standard or form contract, is less important the larger the stakes in the contract and hence the smaller the ratio of the costs of transacting to the value of the exchange. The larger the stakes, the more it will pay the parties to negotiate contract terms finely adapted to the particular circumstances of their contract.

If the purpose of the law of contracts is to effectuate the desires of the contracting parties, then the proper criterion for evaluating the rules of contract law is surely that of economic efficiency. Since the object of most voluntary exchanges is to increase value or efficiency, contracting parties may be assumed to desire a set of contract terms that will maximize the value of the exchange. It is true that each party is interested only in the value of the contract to it. However, the more efficiently the exchange is structured, the larger is the potential profit of the contract for the parties to divide between them.

The use of economic efficiency as a criterion for legal decision-making is of course controversial. In the area of contract, however, the criterion is well-nigh inevitable once it is conceded that the parties to a contract have the right to vary the terms at will. If the rules of contract law are inefficient, the parties will (save as transaction costs may sometimes outweigh the gains from a more efficient rule) contract around them. A law of contract not based on efficiency considerations will therefore be largely futile. This is a powerful reason for expecting that the law of contract has, in fact, been informed by efficiency considerations, even if judges and lawyers may have found it difficult to articulate the underlying economic premises of the law.

Moreover, the spirit of our analysis is severely positive. We are interested not in whether a contract law based on efficiency is ultimately a good law, but in whether the assumption that contract law has been shaped by a concern with economic efficiency is a fruitful one in explaining the doctrinal positions and typical case outcomes of that law.

2. *The economics of impossibility*. The typical case in which impossibil-

ity or some related doctrine is invoked is one where, by reason of an unforeseen or at least unprovided-for event, performance by one of the parties of his obligations under the contract has become so much more costly than he foresaw at the time the contract was made as to be uneconomical (that is, the costs of performance would be greater than the benefits). The performance promised may have been delivery of a particular cargo by a specified delivery date—but the ship is trapped in the Suez Canal because of a war between Israel and Egypt. Or it may have been a piano recital by Gina Bachauer—and she dies between the signing of the contract and the date of the recital. The law could in each case treat the failure to perform as a breach of contract, thereby in effect assigning to the promisor the risk that war, or death, would prevent performance (or render it uneconomical). Alternatively, invoking impossibility or some related notion, the law could treat the failure to perform as excusable and discharge the contract, thereby in effect assigning the risk to the promisee.

From the standpoint of economics—and disregarding, but only momentarily, administrative costs—discharge should be allowed where the promisee is the superior risk bearer; if the promisor is the superior risk bearer, nonperformance should be treated as a breach of contract. "Superior risk bearer" is to be understood here as the party that is the more efficient bearer of the particular risk in question, in the particular circumstances of the transaction. Of course, if the parties have expressly assigned the risk to one of them, there is no occasion to inquire which is the superior risk bearer. The inquiry is merely an aid to interpretation.

A party can be a superior risk bearer for one of two reasons. First, he may be in a better position to prevent the risk from materializing. This resembles the economic criterion for assigning liability in tort cases.[24] It is an important criterion in many contract settings, too, but not in this one. Discharge would be inefficient in any case where the promisor could prevent the risk from materializing at a lower cost than the expected cost of the risky event. In such a case efficiency would require that the promisor bear the loss resulting from the occurrence of the event, and hence that occurrence should be treated as precipitating a breach of contract.

But the converse is not necessarily true. It does not necessarily follow from the fact that the promisor could not at any reasonable cost have prevented the risk from materializing that he should be discharged from his contractual obligations. Prevention is only one way of dealing with risk; the other is insurance. The promisor may be the superior insurer. If so, his inability to prevent the risk from materializing should not operate to discharge him from the contract, any more than an insurance company's inability to prevent a

[24] See Richard A. Posner, *supra* note 2, at 69.

fire on the premises of the insured should excuse it from its liability to make good the damage caused by the fire.

To understand how it is that one party to a contract may be the superior (more efficient) risk bearer even though he cannot prevent the risk from materializing, it is necessary to understand the fundamental concept of risk aversion. Compare a 100 percent chance of having to pay \$10 with a one percent chance of having to pay \$1000. The expected cost is the same in both cases, yet not everyone would be indifferent as between the two alternatives. Many people would be willing to pay a substantial sum to avoid the uncertain alternative—for example, \$15 to avoid having to take a one percent chance of having to pay \$1000. Such people are risk averse. The prevalence of insurance is powerful evidence that risk aversion is extremely common, for insurance is simply trading an uncertain for a certain cost. Because of the administrative expenses of insurance, the certain cost (that is, the insurance premium) is always higher, often much higher, than the uncertain cost that it avoids—the expected cost of the fire, of the automobile accident, or whatever. Only a risk-averse individual would pay more to avoid bearing risk than the expected cost of the risk.

The fact that people are willing to pay to avoid risk shows that risk is a cost. Accordingly, insurance is a method (alternative to prevention) of reducing the costs associated with the risk that performance of a contract may be more costly than anticipated. It is a particularly important method of cost avoidance in the impossibility context because the risks with which that doctrine is concerned are generally not preventable by the party charged with nonperformance. As mentioned, if they were, that would normally afford a compelling reason for treating nonperformance as a breach of contract. (Stated otherwise, a "moral hazard" problem would be created if the promisor were insured against a hazard that he could have prevented at reasonable cost.)

The factors relevant to determining which party to the contract is the cheaper insurer are (1) risk-appraisal costs and (2) transaction costs.[25] The former comprise the costs of determining (a) the probability that the risk will materialize and (b) the magnitude of the loss if it does materialize. The amount of risk is the product of the probability of loss and of the magnitude of the loss if it occurs. Both elements—probability and magnitude—must be known in order for the insurer to know how much to ask from the other party to the contract as compensation for bearing the risk in question.

The relevant transaction costs are the costs involved in eliminating or minimizing the risk through pooling it with other uncertain events, that is, diversifying away the risk. This can be done either through self-insurance or

[25] The appraisal costs are really part of the transaction costs, but to facilitate exposition we exclude them from the latter concept.

through the purchase of an insurance policy (market insurance). To illustrate, a corporation's shareholders might eliminate the risk associated with some contract the corporation had made by holding a portfolio of securities in which their shares in the corporation were combined with shares in many other corporations whose earnings would not be (adversely) affected if this particular corporation were to default on the contract. This would be an example of self-insurance. Alternatively, the corporation might purchase business-loss or some other form of insurance that would protect it (and, more important, its shareholders) from the consequences of a default on the contract; this would be an example of market insurance. Where good opportunities for diversification exist, self-insurance will often be cheaper than market insurance.[26]

The foregoing discussion indicates the factors that courts and legislatures might consider in devising efficient rules for the discharge of contracts. An easy case for discharge would be one where (1) the promisor asking to be discharged could not reasonably have prevented the event rendering his performance uneconomical, and (2) the promisee could have insured against the occurrence of the event at lower cost than the promisor because the promisee (a) was in a better position to estimate both (i) the probability of the event's occurrence and (ii) the magnitude of the loss if it did occur, and (b) could have self-insured, whereas the promisor would have had to buy more costly market insurance. As we shall see, not all cases are this easy.

3. *The analysis applied.* Two hypothetical cases will illustrate the nature of the economic analysis of a discharge case.

(1) A, a manufacturer of printing machinery, contracts with B, a commercial printer, to sell and install a printing machine on B's premises. As B is aware, the machine will be custom-designed for B's needs and once the machine has been completed its value to any other printer will be very small. After the machine is completed, but before installation, a fire destroys B's premises and puts B out of business, precluding B from accepting delivery of the machine. The machine has no salvage value and A accordingly sues for the full price. B defends on the ground that the fire, which the fire marshal has found occurred without negligence on B's part—indeed (the same point, in an economic sense), which could not have been prevented by B at any reasonable cost—should operate to discharge B from its obligations under the contract.[27]

[26] A life-insurance company, for example, self-insures by pooling the death risks of its (many) policy-holders; it holds a diversified portfolio of life expectancies. The individual could not self-insure the risk of his death.

[27] See *infra*, at notes 69-70, for a discussion of the legal treatment of the real-world counterparts to this hypothetical case.

The risk that has materialized, rendering completion of the contract uneconomical, is that a fire on B's premises would prevent B from taking delivery of the machine at a time when the machine was so far completed (to B's specifications) that it would have no value in an alternative use. The fact that the fire occurred in premises under B's control suggests that B had the superior ability to *prevent* the fire from occurring. This consideration is entitled to some weight even though the fire marshal found that B could not, in fact, have prevented the fire (economically); the fire marshal might be wrong. Certainly as between the parties B had the superior ability to prevent the fire. But in light of the fire marshal's finding, ability to prevent cannot weigh too heavily in the decision of the case.

Turning to the relative ability of the parties to *insure* against the machine's loss of value as a result of the fire, we note first that while B was in a better position to determine the probability that a fire would occur, A was in a better position to determine the magnitude of the relevant loss (the loss of the resources that went into making the machine) if the fire did occur. That loss depended not only on the salvage value of the machine if the fire occurred after its completion but also on its salvage value at various anterior stages. A knows better than B the stages of production of the machine and the salvage value at each stage.

Assuming the actuarial value of the risk has been computed, there remains the question which of the parties could have obtained insurance protection at lower cost. Depending on the volume of A's production and on A's prior experience with contingencies such as occurred in the contract with B, A may be able to eliminate the risk of such contingencies simply by charging a higher price—in effect, an insurance premium—to all of its customers; A may in short be able to self-insure. B is less likely to be able to do so: the magnitude of its potential liability to A in the event of a default may greatly exceed any amount it could hope to pass on to its customers in the form of higher prices. As for market insurance, it seems unlikely that B could obtain for a reasonable price a fire insurance policy that protected it not only against the damage to its premises (and possibly to its business) caused by a fire but also against its contractual liability to A which, as mentioned, depends on the stage in the production of the machine at which the fire occurs, a matter within the private knowledge of A.

We are inclined to view A as the superior risk bearer in these circumstances and thus to discharge B. This inclination would be strengthened if it turned out that A was a publicly held, and B a closely held, corporation, for then the owners of A could eliminate the risk of the loss of the machine's value simply by combining their shares in A with shares of other companies in a suitably diversified portfolio. It is generally more difficult for the owners of a closely held corporation to diversify away the risks associated with their holdings in the corporation, for often those holdings represent a large fraction of their net assets.[28]

(2) For our second hypothetical case,[29] let C be a large and diversified business concern engaged in both coal mining and the manufacture and sale of large coal-burning furnaces. C executes contracts for the sale of furnaces to D,E,F, etc. in which it also agrees to supply coal to them for a given period of time at a specified price. The price, however, is to vary with and in proportion to changes in the consumer price index.

A few years later the price of coal unexpectedly quadruples and C repudiates the coal-supply agreements arguing that if forced to meet its commitments to supply coal at the price specified in its contracts it will be bankrupted. Each purchaser sues C seeking as damages the difference between the price of obtaining coal over the life of C's commitment and the contract price. C argues that the rise in the price of coal was unforeseeable and ought to operate to discharge it from its obligations.

On these facts the case might be decided against C simply on the ground that the contract explicitly assigned to it all price risks (except those resulting from changes in the value of money). If, however, C were able to convince a court that the risk had not been specifically assigned in the instrument (either on the theory that C was really contracting for the sale of a furnace and the coal provisions of the contract were incidental, or that the source or magnitude of the price change that occurred was not within the parties' contemplation), it would then be necessary to determine whether C or the purchasers were the superior risk bearer(s).

With regard to the parties' relative abilities to forecast the consequences for contract performance of a steep change in the price of coal, two factors seem critical: the amount of coal that C has contracted to deliver forward at a fixed price, and the degree of C's exposure to coal price changes. C's

[28] This discussion raises the general question whether the corporate character of the contracting parties should ever be a factor in deciding who is the superior risk bearer. It has not been a factor used by courts, and they may be correct in this. While in principle the shareholders of a large publicly held corporation can, simply by holding a diversified portfolio of securities, eliminate all of the diversifiable risk associated with the corporation's activity, the practical ability of shareholders to achieve reasonably complete diversification depends on a host of economic and institutional (tax, etc.) factors, including the availability of diversified investment vehicles (for example, the new "index" or "market" mutual funds: see John H. Langbein & Richard A. Posner, Market Funds and Trust-Investment Law, pts. I and II, 1976 A.B.F. Res. J. 1; 1977 *id.* at 1). As these vehicles emerge, it may become necessary to rethink the relevance of corporate character (it is notable that most of the impossibility cases predate the rise of the modern corporation), but perhaps for now the factor should continue to be excluded from impossibility analysis.

[29] Suggested by Joskow's case study of the pending Westinghouse litigation, *supra* note 2. We mean to intimate no view on the facts or legal merits of that litigation, which at this writing is still in the trial stage.

exposure depends on the amount of coal sold forward that is not covered either by C's existing coal stocks or by its forward purchase contracts, multiplied by the spread in price between the average forward sale price and the average forward purchase price. Thus the magnitude of the potential loss from the price increase is simply C's net short position, and C is in a better position than any of its (typical) customers to estimate this magnitude since only C has precise knowledge of its own net asset position and contractual commitments.

The likelihood (as distinct from magnitude) of loss in this case *appears* to depend crucially on the probability of a large movement in the price of coal, a movement which C may have no greater ability to predict than its purchasers. But the appearance is deceptive. The critical variable is again the extent of C's exposure. If C had a perfectly neutral hedge position in coal, no movement in the price of coal could affect it. The closer C is to a neutral hedge position, the less impact a given movement in price will have on its balance sheet. Hence the ability to forecast the relevant probability here depends ultimately on knowing C's net coal position, and C knows it best.

Moreover, C can readily insure against the contingency involved in this case. Its owners can self-insure against the financial risks to C of having to make good on its coal-supply commitments at the price specified in the contract either by holding a diversified portfolio of common stocks or by purchasing shares just in the firms that are on the buying side of C's contracts. To be sure, the shareholders of C's customers may be able to insure themselves in the same fashion and at no greater cost. But an additional factor is that, as suggested above, C can self-insure by purchasing covering contracts to perfect a neutral hedge. Since there are transactional economics of scale in making forward contracts, C could execute the hedge at lower cost than each of its purchasers.

To complicate the analysis, observe that while C has better knowledge of its total exposure, it doesn't really know its potential liability to its customers since that depends on the steps they might be required by the contract doctrine of mitigation of damages to take to minimize the net cost of the unexpected increase in the price of coal. For example, at the current price of coal, oil or natural gas might become an economical substitute. If so, the measure of damages would not be the difference between the contract and current prices of coal; it would be the difference between the contract price of coal and the current price of a substitute fuel, adjusting for any differences in the quality of the substitute. Nonetheless, it seems reasonably clear to us that, everything considered, C is the superior risk bearer and its claim of discharge should fail.

4. *The costs of particularized inquiry.* In the discussion of our two hypothetical cases, we applied the standard of efficient discharge developed

earlier directly to the facts of the case. This is not necessarily the optimum approach.[30] A broad standard makes it difficult to predict the outcome of particular cases. If the purpose of contract law (so far as relevant here) is to supply standard contract terms in order to economize on negotiation, it will be poorly served by a legal standard so vague and general that contracting parties will encounter great difficulty in trying to ascertain the judicially implied terms of their contract; if the allocation of risks in the contract is unclear, neither party will know which risks he should take steps to prevent or insure against because he will be held liable if they materialize.[31]

Our second hypothetical case is a particularly good illustration of the dangers of a broad standard. The contract seemed on its face to allocate the risk of coal price changes (save those due to inflation) to C; if the allocation is instead to depend on how a court decides years later who the superior risk bearer was, the apparent definiteness of the contract terms evaporates. One way of avoiding this result in the coal hypothetical is to deem the case outside the scope of the discharge defense by noting the absence of any showing that performance under the contract was uneconomical. We assume the coal company's position is not that it could not comply with the contract at an economically reasonable price (it could buy on the open market all of the coal that it needed to fulfill its contractual obligations), but that compliance would bankrupt it. This is tantamount to arguing that a breach of contract should be excused when the breaching party for some reason lacks the resources to make good the other party's damages.

Another approach one can take in the coal case to rule out discharge is to reason that when a contract explicitly assigns the risk of price changes to one party, discharge should not be allowed simply because the price change is greater than anticipated, regardless of which party is the superior bearer of the unanticipated portion of the change. The theory here would be that since the parties must negotiate with regard to price anyway, they can, at the same time and at little additional negotiating cost, place a limit on the promisor's price exposure. If they do not do so, the court will not do it for them.

The proper use of the sort of general standard developed earlier in this section is to guide not the decision of particular cases but the formulation of rules to decide groups of similar cases. Our effort in the next part is to show that a set of such rules—rules consistent with the general standard developed

[30] On the choice between rules and standards see Isaac Ehrlich & Richard A. Posner, An Economic Analysis of Legal Rulemaking, 3 J. Leg. Studies 257 (1974).

[31] See Stephen S. Ashley, *supra* note 2, and 6 Arthur Linton Corbin, *supra* note 6, at § 1328. The other side of the coin, however, is that premature declaration of a precise rule may discourage the parties to litigation from presenting to the court evidence regarding the particular circumstances of the case that might enable a more suitable rule to be formulated. See also *infra* p. 114.

earlier—is implicit in the judicial decisions applying impossibility and related doctrines.

II. Application of the Economic Approach

Here we compare the implications of the economic analysis first with the prevailing doctrines of the discharge case law, next with the outcomes in the principal types of cases, and then with the approach of the Uniform Commercial Code. The final subpart considers what to do when the economic analysis is inconclusive. As a preliminary matter, we note that if we are correct in suggesting that any legal system characterized by positive transaction costs would be operating inefficiently if it failed to develop some version of the impossibility doctrine, the frequent assertion that the discharge concept was recognized relatively late in the development of the common law constitutes at least a minor puzzle.[32] The case most frequently cited in support of this assertion is *Paradine v. Jane,* where the court stated in dictum: "when the party by his own contract creates a duty or charge upon himself, he is bound to make it good, if he may, notwithstanding any accident by inevitable necessity, because he might have provided against it by his contract."[33] This remark, which was only tangentially related to the matter being litigated and which provides the sole basis for modern interest in the case, was not truly representative of the English case law even at the time[34] and has, of course, long since been rejected both in England[35] and in the United States.[36]

[32] See, for example, John Murray, Jr., *supra* note 19, § 197, at 389.

[33] Aleyn 26, 82 Eng. Rep. 897 (1647). A tenant had been dispossessed by a Prince Rupert, an invader. The court held that the dispossession did not excuse the tenant's independent duty to pay rent to the landlord.

[34] See William Herbert Page, The Development of the Doctrine of Impossibility of Performance, 18 Mich. L. Rev. 589 (1920). See also Brewster v. Kitchell, Salkeld 1, 91 Eng. Rep. 177 (1697) (contract discharged because of the destruction of a specific material thing); and Hyde v. The Dean and Canons of Windsor, Cro. Eliz. 552, 78 Eng. Rep. 798 (1597) (contract discharged because of the death of the promisor).

[35] See, for example, Taylor v. Caldwell, 3 B. & S. 826, 122 Eng. Rep. 309 (1863). For the complete history of the English experience with the discharge doctrine see Glanville L. Williams, The Law Reform (Frustrated Contracts) Act, 1943 (1944).

[36] See, for example, Kronprinzessin Cecilie, 244 U.S. 12, 22 (1917) (per Justice Holmes): "The seeming absolute confinement to the words of an express contract indicated by the older cases like *Paradine v. Jane,* Aleyn, 26, has been mitigated so far as to exclude from the risks of contracts for conduct (other than the transfer of fungibles like money), some, at least, which, if they had been dealt with, it cannot be believed that the contractee would have demanded or the contractor would have assumed."

The Continental legal systems have also developed a doctrine of impossibility. It appears to be similar to the Anglo-American concept (see, for example, Comment, Commercial Frustration: A Comparative Study, 3 Tex. Int'l L.F. 275 (1967)), but we have not attempted a comparison in this paper.

Professor Gilmore has used the expansion of the impossibility doctrine in recent times to argue the breakdown of an economically oriented law of contracts.[37] In his view, nineteenth-century contract law narrowly circumscribed the defense of impossibility because that defense was inconsistent with a view of contract law based on *laissez-faire* (*i.e.*, classical economic) principles. As we have seen, however, there is no inconsistency between allowing discharge in cases where the promisee is the superior risk bearer and viewing contract law as a method of maximizing efficiency viewed essentially in classical economic terms. The rise of the discharge concept vindicates rather than undermines the economic view of contract law.

A. *Prevailing Legal Doctrines*

From the standpoint of economics, contract discharge should not be allowed when the event rendering performance uneconomical was reasonably preventable by either party. This view prevails in the case law.[38] According to Corbin "it may be stated with very little qualification that if the plaintiff has himself made it impossible for the defendant to perform his promise, the nonperformance is not an actionable breach of duty."[39] Nor is "a promissor [discharged] from his contractual duty if he himself wilfully brought . . . about [the condition preventing performance], or if he could have foreseen and avoided it by the exercise of a reasonable diligence and efficiency."[40]

We said that the purpose of an economically based discharge doctrine is to supply those contract terms that the parties would have adopted if they had negotiated expressly over them. This proposition has two important corollaries: (1) the doctrine is properly limited to contingencies not specifically provided for in the contract; (2) terms expressly negotiated by the parties must be honored—they may if they wish contract to do the "impossible." The contracting parties' chosen allocation of risk must be the most efficient one possible (subject, of course, to the constraints imposed by the costs of information and other transactional frictions), since, if it were not, a reallocation of risks by the parties would be possible that would increase the utility of at least one of the parties without reducing the utility of the other.

That the explicit terms of a contract control the assignment of risk, thus

[37] Grant Gilmore, The Death of Contract 80-82, 94-96 (1974).

[38] See, for example, Gulf, Mobile & O.R.R. v. Illinois Central R.R., 128 F. Supp. 311 (D. Ala. 1954), 225 F.2d 816 (5th Cir. 1955); Martin v. Star Publishing Co., 50 Del. 181, 126 A.2d 238 (1956); Powers v. Siats, 244 Minn. 515, 70 N.W. 2d. 344 (1955); Helms v. B & L Investment Co., 19 N.C. App. 5, 198 S.E. 2d 79 (1973). See also 6 Arthur Linton Corbin, *supra* note 6, at § 1959; Restatement of Contracts §§ 281, 459 (1932); and 41 Marq. L. Rev. 314 (1957-58).

[39] 6 Arthur Linton Corbin, *supra* note 6, at § 1323.

[40] *Id.* at § 1329.

limiting the discharge doctrine to those contingencies not specifically addressed in the contract, is well accepted. In the words of Holmes:

One who makes a contract never can be absolutely certain that he will be able to perform it when the time comes, and the very essence of it is that he takes the risk within the limits of his undertaking. The modern cases may have abated somewhat the absoluteness of the older ones in determining the scope of the undertaking by the literal meaning of the words alone . . . But when the scope of the undertaking is fixed, that is merely another way of saying that the contractor takes the risk of the obstacles to that extent.[41]

Similarly, in a case in which a contract was terminated because of the promisor's death, Cardozo stated that the parties "may say by their contract what compensation shall be made in the event of that excuse [death]," and the "award will then conform to the expression of their will."[42]

The principle that parties may contract "to do the impossible" is also an accepted legal doctrine. In Williston's words:

A man may contract to do what is impossible, as well as what is difficult, and be liable for failure to perform. The important question is whether an unanticipated circumstance has made performance of the promise vitally different from what should reasonably have been within the contemplation of both parties when they entered into the contract.[43]

This statement is based on judicial language. As the Supreme Court put it:

There can be no question that a party may by an absolute contract bind himself or itself to perform things which subsequently become impossible, or to pay damages for the nonperformance. . . .[44]

Similar expressions occur throughout the discharge case law.[45]

Given that the parties may explicitly allocate risks, a problem has developed in determining when they have done so (as in our coal hypothetical). Some courts have approached the problem by asking whether the event in question could have been anticipated and so provided for in the contract.[46] If able to answer this question affirmatively they have too hastily concluded that the contract explicitly allocated the risk of that contingency:

The purpose of a contract is to place the risks of performance upon the promisor, and the relation of the parties, terms of the contract, and circumstances surrounding its

[41] Day v. United States, 245 U.S. 159, 161 (1917).

[42] Buccini v. Paterno Constr. Co., 253 N.Y. 256, 258, 170 N.E. 910, 911 (1930).

[43] 6 Samuel Williston, *supra* note 6, at § 1931.

[44] Chicago, Mil. & St. P. Ry. v. Hoyt, 149 U.S. 1, 14-15 (1893).

[45] See, for example, Annot., 84 A.L.R. 2d. 12 (1962).

[46] See, for example, Chicago, Mil. & St. P. Ry. v. Hoyt, 149 U.S. 1 (1893).

> formation must be examined to determine whether it can be fairly inferred that the risk of the event that has supervened to cause the alleged frustration was not reasonably foreseeable. If it was foreseeable there should have been provision for it in the contract, and the absence of such a provision gives rise to the inference that the risk was assumed.[47]

The foreseeability test, at least in the form usually stated, is nonoperational, for it fails to indicate which contracting party is the superior bearer of the foreseeable risk. The test is disappearing, and although occasionally mentioned is seldom applied.[48] As Judge Wright correctly observed in a recent case: "Foreseeability or even recognition of a risk does not necessarily prove its allocation."[49]

B. *Typical Cases*

In this subpart we consider the major recurring issues in the discharge case law. As one would expect, there are some inconsistent holdings among the multiple jurisdictions that have considered these issues. It is not our purpose to explain or even identify every inconsistent outcome. We are content to explain the typical outcomes in the major classes of case.

1. *Contracts for personal services*. Discharge of contracts for personal services is often sought when an employee has died unexpectedly. In *Cutler v. United Shoe Mach. Corp.*,[50] a machinery company had an employment contract with an inventor. When the inventor died, the court, in a suit by the inventor's estate, held the contract discharged. This outcome—typical in employee cases—is consistent with the economic approach. The employee (1) is in at least as good a position as his employer to estimate his life expectancy, (2) has better knowledge of the value of the contract to him compared to that of any alternative employment and (3) can readily purchase life insurance.

If the employer were seeking damages as a result of the employee's death, alleging that death had caused a breach of the employee's obligations under the contract, the contract should also be discharged. Estimating life expectancy is in general no more (if no less) difficult for the employer than for the employee (if the employee knew of a condition reducing his life expectancy below the actuarial level for people of his age, sex, etc., discharge would presumably not be allowed). And the employer is better able to estimate the cost to him (in firm-specific human capital, replacement costs, etc.) if the employee dies, and can usually self-insure against such an eventuality.

[47] Lloyd v. Murphy, 25 Cal. 2d 48, 54, 153 P.2d 47, 50 (1944).

[48] See, for example, Note, 53 Colum. L. Rev. 94 (1953).

[49] Transatlantic Financing Corp. v. United States, 363 F.2d. 312, 318 (D.C. Cir. 1966).

[50] 274 Mass. 341, 174 N.E. 507 (1931).

The discharge doctrine may also be invoked in personal-services cases when an unexpected contingency prevents the completion of the promised service without physically disabling the promisor, as in *Hein v. Fox.*[51] Fox had agreed to drill a well on Hein's land. In two separate drilling attempts a boulder or layer of rock was struck, once at a depth of 250 feet and again at a depth of 350 feet, preventing completion of the well, and due to wartime regulations the special casing needed to penetrate the rock was unavailable. The court properly refused discharge. Fox, a driller, was better able than his customer to estimate the probability of encountering rock deep below the surface of the earth, the costs of alternative drilling techniques, the likelihood of failing to obtain a particular input (pipe casing), and the costs of a substitute input. And Fox could have spread the risk of these contingencies among all of his customers in his price for drilling, thereby providing effective and inexpensive self-insurance.

2. *The effects of supervening illegality on teachers' contracts and on leases.* In *Phelps v. School District,*[52] the state board of health had ordered a school closed for two months during its regular term because of a flu epidemic and the school district had laid off the teachers at that school. The district argued that its contract with the teachers was discharged because it was legally prevented from performing it. The court properly refused discharge. Although neither party could have prevented the epidemic, the school district was the superior risk bearer. It could spread the risk among all of its schools and hence among all of the teachers; it had a "diversified portfolio" of schools. If market insurance had been desired, the district could have insured all of its employees in one transaction, thereby eliminating the need for each individual to incur transaction costs.

Although the outcome in *Phelps* is the usual one in a case of this sort,[53] an Indiana decision held on similar facts that the teachers' contract was discharged by the school closing.[54] Our analysis suggests that this result is inefficient, a conclusion supported (weakly)[55] by the subsequent action of the Indiana legislature in enacting a statute assigning to the school boards the risks created by school closings.[56]

[51] 126 Mont. 514, 254 P.2d 1076 (1953).

[52] 302 Ill. 193, 134 N.E. 312 (1922).

[53] See, for example, Elsemore v. Inhabitants of Hancock, 137 Me. 248, 18 A.2d 692 (1941); and 6 Arthur Linton Corbin, *supra* note 6, at § 1357.

[54] Gregg School Township v. Hinshaw, 76 Ind. App. 503, 132 N.E. 586 (1921).

[55] There is no presumption that legislation seeks to enhance efficiency. See, for example, George J. Stigler, The Theory of Economic Regulation, 2 Bell J. Econ. & Management Sci. 3 (1971).

[56] Ind. Code Ann. § 20-6-8-2 (1971) provided: "If, during the term of a teacher's contract the school or schools are closed by order of the school corporation, or by order of the health authorities, or if, through no fault of the teacher, school cannot be held, such teacher shall

The issue of supervening illegality as a ground for discharge also arises when a leasehold is radically modified by operation of law. But here the economic analysis must remain tentative because it may not be possible to determine *a priori* which party is the superior risk bearer. In *Stratford v. Seattle Brewing & Malting Co.*, a party leased premises to be used "for saloon purposes."[57] The lease was subsequently modified to allow other related uses. When as the result of a referendum the lessee lost the liquor license necessary to continue saloon operations, the contract was held discharged. The effect was to assign the risk of the law change to the lessor. But in another group of cases, leases of automobile showrooms were held not to be discharged by federal restrictions on the sale of automobiles during World War II.[58] Here the lessees were assigned the risk.

In the liquor-license case, the referendum reduced the value of the property by disallowing its most profitable use. The loss in value was equal to the difference between the original rental value and the rental value after the referendum. And similarly in the automobile-showroom cases the loss was the difference between the original rental value and the rental value after the passage of the regulations restricting automobile production. It would seem that in both cases the lessor would be better able than the lessee to estimate the opportunity value of the premises in its next best use. But the lessee should be in a better position to estimate the other key parameter, the probability that the loss will occur. One would expect automobile dealers, for example, to be more knowledgeable with respect to the possibility of a limit on new-car production than the average commercial land owner.

When the two key parameters of the economic analysis point in opposite directions, the analysis is indeterminate on a general level and must proceed to an estimation of their relative empirical importance. The lessor in *Stratford* was a brewer,[59] and was therefore probably as competent as the lessee to estimate the likelihood of the loss of the liquor license. In the typical automobile case, the courts have found that the next best use of the leased showroom was as a showroom for the sale of second-hand automobiles or as an auto repair facility. Hence the typical lessee in the automobile cases may well have been as capable as the typical lessor of estimating the magnitude of the loss. We conclude that both the liquor-license and the automobile-showroom cases may have been correctly decided from an economic standpoint.

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receive regular payments during such time the school or schools are closed." This statute has been superseded by a similar one. See *id.* § 20-6.1-5-8 (Supp. 1976).

[57] 94 Wash. 125, 162 P.31 (1916).

[58] See, for example, Lloyd v. Murphy, 25 Cal. 2d 48, 153 P.2d 47 (1944); Leonard v. Autocar Sales & Service Co., 392 Ill. 182, 64 N.E. 2d 477 (1945).

[59] The lease in fact required the lessee to purchase all of its beer requirements from the lessor's brewery.

But there is a question whether so microscopic an examination of the facts is an appropriate predicate for decision, in light of the administrative costs, discussed in Part I, of applying the impossibility doctrine on a highly particularistic case-by-case basis rather than on the basis of rules that decide all of the cases within a specific category in the same way—for example, a rule deciding all lease discharge cases either in the lessee's or in the lessor's favor. Unfortunately, it is unclear *a priori* which would be the more efficient rule. A relevant bit of empirical evidence is that in contracts between a large and diversified real estate owner-lessor and each of its many major, and geographically diversified, retail-chain lessees (for example, Walgreen's, Kresge's, and the A&P, National and Jewel Food Stores), the risk of loss from changes in circumstances that "prevent the lessee from doing business" is invariably and explicitly placed on the lessor.[60] Although this is only a fragment of the empirical evidence required to formulate a proper rule for applying the impossibility doctrine in lease cases, it is useful in two respects. First, it suggests that in real estate cases between *diversified* entities the lessor is the superior risk bearer.[61] Second, it indicates that there are sources available to aid in an empirical resolution of the difficult questions that are raised when the key parameters of the economic analysis of impossibility point in opposite directions. The potential role of empirical analysis both in testing and implementing economic theories of contract law is discussed further in the conclusion of this article.

3. *Transportation contracts*. Another common issue in the impossibility area is the effect of wars or other unexpected events on transportation contracts. To illustrate the relative abilities of the parties to bear risk in cases of this sort, consider the effect on shipping contracts of the closing of the Suez Canal by the Egyptian government in 1956. The closing required ships passing between Atlantic ports and ports in the Middle East to sail around Africa, a longer and more expensive voyage, and gave rise to voluminous litigation. The general result was the enforcement of the shipping contracts.[62] For example, in *Transatlantic Financing Corp. v. United States*,[63] a shipowner argued that its contract with the United States to transport

[60] This information is based upon an interview with the general counsel of one of the nation's largest real estate firms.

[61] This may be because the lessor's margin of superiority with regard to ability to estimate the magnitude of the loss to him from termination of the lease exceeds the lessee's margin of superiority with regard to estimating the probability of the loss. That margin may be small with regard to events like changes in the law that no one may be able to predict very well.

[62] See, for example, American Trading and Prod. Corp. v. Shell Int'l Marine Ltd., 453 F.2d 939 (2d Cir. 1972); Transatlantic Financing Corp. v. United States, 363 F.2d 312 (D.C. Cir. 1966); Glidden Co. v. Hellenic Lines, Ltd., 275 F.2d 253 (2nd Cir. 1960); Ocean Tramp Tankers Corp. v. V/O Sovfracht (The Eugenia), [1964] 2 Q.B. 226; and Tsakiroglou & Co. v. Noblee Thorl G.m.b.H., [1960] 2 Q.B. 348.

[63] 363 F.2d 312 (D.C. Cir. 1966).

wheat from the U.S. to Iran was discharged by the closing of the Suez Canal. The issue was framed by Judge Wright as follows:

First, a contingency—something unexpected—must have occurred. Second, the risk of the unexpected occurrence must not have been allocated either by agreement or by custom. Finally, occurrence of the contingency must have rendered performance commercially impracticable.[64]

The court found that the closing of the canal was unexpected and that the risk of its occurrence had not been expressly allocated between the parties. It then addressed the ultimate question: was the closing grounds for discharge?

To answer the question, Judge Wright sought to determine which party—the owner of the ship or the government—was the superior risk bearer. His answer addressed itself to the precise elements of our economic framework:

Transatlantic was no less able than the United States to purchase insurance to cover the contingency's occurrence. If anything, it is more reasonable to expect owner-operators of vessels to insure againt the hazards of war. They are in the best position to calculate the cost of performance by alternative routes (and therefore to estimate the amount of insurance required), and are undoubtedly sensitive to international troubles which uniquely affect the demand for and cost of their services.[65]

This passage makes the decision on whether to discharge the contract turn on an examination of the key economic parameters that we have identified. The shipowner is the superior risk bearer because he is better able to estimate the magnitude of the loss (a function of delay, and of the value and nature of the cargo, which are also known to the shipowner) and the probability of the unexpected event. Furthermore, shipowners who own several ships and are engaged in shipping along several different routes can spread the risks of delay on any particular route without purchasing market insurance or forcing their shareholders to diversify their common-stock portfolios. And the shipping company could, if it desired, purchase in a single transaction market insurance covering multiple voyages. Of course, the shipper in the particular case—the United States Government—was well diversified too, but decision should (and here did) turn on the characteristics of shippers as a class, if an unduly particularistic analysis is to be avoided.

It might appear that the owner of the shipment would have a better idea than the shipowner of the consequences of delayed arrival. But consequential damages of this type are not relevant to the discharge question, because the rule of *Hadley v. Baxendale*[66] places liability for such damages

[64] *Id.* at 315.

[65] *Id.* at 319.

[66] 9 Ex. 341, 156 Eng. Rep. 145 (1854).

(in the absence of express agreement to the contrary) on the shipper rather than on the carrier—and properly so from the standpoint of economics.[67] The question of discharge thus arises only with respect to that portion of the damages that the carrier can estimate without knowing the details of the shipper's business.

Parris v. Stratton Cripple Creek Mining & Dev. Co.[68] illustrates the application of the discharge doctrine in another transportation setting. A trucker contracted with a mining company to haul gold ore from the Cripple Creek mining field in Colorado to a nearby mill. The contract between the mining company and the milling company entitled the mill to suspend operations on 60 days notice. When the mill closed and was adjudged bankrupt, the mining company argued that the trucking contract should be discharged. The court agreed. The mining company was probably in a better position to estimate the probability that the mill would close, but the trucker was better able to ascertain the magnitude of the loss—being the difference between the contract price and the opportunity value of his service—and he could spread the risk by contracting to supply hauling services to customers who were engaged in other businesses and hence were unlikely to be affected by the mill closing.

4. *Contracts for the manufacture or supply of specialized equipment.* In *Siegel v. Eaton & Prince Co.*[69] a firm contracted to "furnish and erect" an elevator in the Siegel Cooper department store. The contract was held to be discharged when the store was destroyed by fire without fault on the part of Siegel Cooper. In a similar case decided a year later, *Huyett & Smith Mfg. Co. v. Chicago Edison Co.*,[70] the Edison Company, which had agreed to provide equipment to supply electric lighting and power in the First Regiment Armory Building during the Columbian Exposition (the Chicago World's Fair), subcontracted with Huyett to manufacture special fans and to install them in a ventilating system in the building. The Armory Building was destroyed by fire. The subcontract was held discharged, thereby placing the risk of loss on Huyett, the supplier of the specialized equipment.

The cases, which resemble our first hypothetical in the previous part, seem correctly decided when evaluated from the standpoint of economics. A supplier of specialized equipment is better able than a purchaser to evaluate the degree to which a given piece of equipment is specialized and to estimate the costs of converting it into something usable by other prospective purchasers; and in neither case was the purchaser better able to estimate the probability of the particular casualty. The supplier could spread the risk

[67] See Richard A. Posner, *supra* note 2, at 60-61.

[68] 116 F.2d 207 (10th Cir. 1940).

[69] 165 Ill. 550, 46 N.E. 449 (1896).

[70] 167 Ill. 223, 47 N.E. 384 (1897).

among all purchasers by discounting the expected value of these contingencies in his contract price, thus eliminating the need for each purchaser to insure; and if explicit market insurance was desired the supplier could have covered all of his sales in a single transaction.

The analysis is not limited to suppliers of equipment. In *Gouled v. Holwitz*, a supplier leased a team of horses which were to be returned by the lessee "in as good condition as they are at present."[71] One of the horses was later found to have spinal meningitis and was shot to death—against the express wishes of the lessee—by an agent of the Society for the Prevention of Cruelty to Animals. The agreement to return the horse was held to have been discharged. The result was to place the risk of death by disease on the horse's owner, and this seems correct. The owner was better able to estimate both the probability of disease and the magnitude of the loss. A horse is a wasting capital asset whose value is animal-specific, depending on particular characteristics of the horse that are likely to be better known to its owner than to a lessee. Furthermore, an owner of several horses greatly reduces the risk of animal death due to disease through the portfolio effect of his multiple ownership.

5. *Contracts for the supply of agricultural products*. The next group of cases we consider concerns contracts to supply agricultural products, and illustrates how the courts can arrive at an economically efficient result yet disguise it as an apparently meaningless semantic distinction. The cases have similar facts. A supplier contracts to deliver a particular quantity and quality of an agricultural product; an unexpected event such as a flood or an exceptionally severe drought prevents delivery; the buyer seeks damages.[72] The courts generally discharge the contract where the supplier is a grower,[73] but enforce it where the supplier is a wholesaler or large dealer.[74] The result is both consistent and efficient; it places the risk of extreme weather conditions on the superior risk bearer. The purchaser from the grower can reduce the risk of adverse weather by diversifying his purchases geographically; there is empirical evidence to suggest that in some climatic regions geographical separation of only a few miles can dramatically reduce the risk of a large loss.[75] When the seller is a wholesaler or large dealer there is no reason to

[71] 95 N.J.L. 277, 113 A. 323 (1921).

[72] See Pearce-Young-Angel Co. v. Charles R. Allen, Inc., 213 S.C. 578, 50 S.E. 2d 698 (1948); and Squillante v. California Lands, Inc., 5 Cal. App. 2d. 89, 42 P.2d 81 (1935).

[73] See, for example, Matousek v. Galligan, 104 Neb. 731, 178 N.W. 510 (1920); and Pearce-Young-Angel Co. v. Charles R. Allen, Inc., 213 S.C. 578, 50 S.E. 2d 698 (1948).

[74] See, for example, United States Co. v. Curtis Peanut Co., 302 S.W. 2d 763 (Tex. Civ. App. 1957).

[75] See Donald N. McCloskey, The Enclosure of Open Fields: Preface to a Study of Its Impact on the Efficiency of English Agriculture in the Eighteenth Century, 32 J. Econ. Hist. 15 (1972), and also his English Open Fields as Behavior Towards Risk, 1 Res. in Econ. Hist. 124 (1976).

allow discharge since he can diversify his purchases and thereby eliminate the risk of adverse weather.

Here as elsewhere the courts have not explicitly characterized the problem as one of identifying the superior risk bearer.[76] They usually state that discharge will be allowed when the contract contemplates a single crop to be grown on a specific tract of land. Similarly, a comment to the relevant section of the Uniform Commercial Code allows discharge if and only if the contract refers to crops grown on land designated explicitly in the agreement.[77] This factor is irrelevant save as a reasonable instrumental variable that distinguishes cases in which the seller is a grower from those where he is a wholesaler. However, consistently with our analysis, one observes a tendency in both the pre-Code and later cases to mitigate the mechanical operation of this rule by either expansive construction of the contract or equitable reformation of its terms.[78]

6. *Grazing contracts.* In *Berg v. Erickson,*[79] a cattle owner from Texas (Berg) contracted to pasture his cattle on Erickson's Kansas ranch. Erickson agreed to "furnish plenty of good grass, water, and salt during the grazing season of 1913."[80] There was no rain that summer and although the cattle survived they failed to reach normal weight. The court enforced the contract and thus awarded damages to Berg. This result seems correct but on a rather particularistic analysis. A cattle owner would in general be better able than a landowner to estimate the magnitude of the loss in cattle value because of inadequate water and could reduce the risk by pasturing his cattle in different ranches, but this method of self-insurance might involve con-

McCloskey, an economic historian, has studied the medieval system of open-field farming. Under the open-field system, farmers lived in the center of a large circular region approximately six miles in diameter. Each farmer owned and worked a number of small widely scattered plots. For generations historians have explained this seemingly inefficient pattern of property rights as the product of quasi-communal ownership or egalitarian sentiment. McCloskey, however, has demonstrated that the scattering was an efficient technique adopted by the farmers to diversify the risk of adverse weather conditions, notably hail. In essence, each farmer held a diversified portfolio of assets (small plots), thereby reducing his overall risk. Weather-induced (hail, frost, etc.) agricultural yield variability remains a problem in modern agriculture. See, *e.g.*, Gordon Manley, Climate and the British Scene (1952).

[76] An exception to the judicial failure to articulate the economic elements of the impossibility doctrine is Judge Wright's opinion in Transatlantic Financing Corp. v. United States, 363 F.2d 312 (D.C. Cir. 1966). See *supra* p. 104.

[77] U.C.C. § 2-615, Comment 9.

[78] An example of a pre-Code case is Snipes Mountain Co. v. Benz Bros. & Co., 162 Wash. 334, 298 P.714 (1931), in which the court allowed an equitable action to reform the contract so that specific land was mentioned, thus allowing discharge. See also Matousek v. Galligan, 104 Neb. 731, 178 N.W. 510 (1920). A case decided under the Code and holding that factors outside the writing may show that the parties contracted with reference to a particular parcel of land is Paymaster Oil Mill Co. v. Mitchell, 319 So. 2d 652 (1975).

[79] 234 F. 817 (8th Cir. 1916).

[80] *Id.* at 818.

siderable transaction costs. Moreover, *this* landowner—a rancher—was presumably knowledgeable about cattle. The other key parameter of our analysis—the ability to estimate the probability of the drought—suggests placing the risk on the rancher (depending, however, on the particular cattle owner's prior experience in the region), especially since

> It was common knowledge that droughts were not unusual in Kansas. It was common knowledge that they decreased the growth of grass. It was common knowledge that one could not tell by the examination of pastures in Kansas, of which he [Berg] had no previous knowledge, in the spring of the year before the 13th of April, whether or not they would produce sufficient grass for 1,000 cattle throughout the coming summer. Berg knew nothing of their productive capacity; Erickson knew all about it.[81]

Like the lease cases discussed earlier, *Berg* is difficult to analyze because the two key parameters seem to point in opposite directions. To reach a correct result, a thorough investigation of the facts is necessary. The court's result reached was (as in most of the cases we have examined) probably correct, in view of the superior knowledge believed by the court to be possessed by Erickson, the rancher. The question remains whether it might not be better to decide all grazing cases the same way.[82]

C. *The Approach of the U.C.C.*

Section 2-615 of the Uniform Commercial Code (U.C.C.) states a general impossibility doctrine for sales cases, limited, however, to cases where the seller of the goods is seeking discharge. The Code provides:

> Except so far as a seller may have assumed a greater obligation . . .
> (a) Delay in delivery or non-delivery in whole or part by a seller . . . is not a breach of his duty under a contract for sale if performance as agreed has been made impracticable by the occurrence of a contingency the non-occurrence of which was a basic assumption on which the contract was made. . . .[83]

This language, which is similar to that employed by the *Restatement of Contracts*,[84] uses impracticability rather than impossibility or commercial frustration as the controlling concept. The Code makes clear that the parties to the contract can control the assignment of risk by inserting appropriate terms in their agreement.[85]

[81] *Id.* at 824.

[82] Two other groups of cases, involving repair and part payment, are discussed in Part III of this article.

[83] U.C.C. § 2-615. See Paul L. Joskow, *supra* note 2, at pt. II, for a fuller economic analysis of § 2-615.

[84] See Restatement of Contracts § 454 (1932), and note 9 *supra*.

[85] U.C.C. § 1-102.

Section 2-615 appears to add little to the common law doctrines and indeed is completely silent on many important issues. As noted above, the entire section is developed exclusively from the seller's point of view. No buyer's relief is specifically contemplated in the Code.[86] This omission has been explained as a cautious reaction on the part of the Code's draftsmen to the then undecided state of the common law with regard to buyers' claims of impossibility.[87] One consequence of the omission, however, is that cases similar to our specialized-machinery hypothetical are not controlled by any provision in the Code.

The general view is that, where it does apply, section 2-615 is consistent with the non-Code case law.[88] Professor Murray has written:

> Though the Code language is not expressed in terms of risk allocation there is little question but that the courts will interpret it in keeping with the now generally recognized basic inquiry of whether the risk created by the occurrence of the contingency should be allocated to the promisor.[89]

The U.C.C. also contains several more specific sections that are relevant to the discharge of a contract on impossibility or related grounds when the event allegedly justifying discharge is the destruction of specific goods identified in the contract.[90] The Code abandons the traditional approach of making the risk of loss from destruction follow the title to the goods—an approach related, although loosely, to the ability to prevent destruction—in favor of a similarly mechanical approach but one avowedly based on risk-allocation concepts.

The Code classifies contracts for the sale of goods as either shipment or destination contracts.[91] A contract is a shipment contract if the seller is not required by the terms of the agreement to deliver the goods to a specified location, and a destination contract if delivery to a specified location is required.[92] Contracts are treated as shipment contracts in the absence of any expressed intention. Under the Code, the risk of loss from fortuitous destruction of the goods is initially on the seller, passing to the buyer when the goods are delivered to the carrier, in the case of a shipment contract, but in the case of a destination contract, only when goods are tendered at the indicated

[86] U.C.C. § 2-615, Comment 9, contains a fleeting reference to the possibility of a buyer's claim of discharge, but the issue is never pursued.

[87] 2 Grant Gilmore, Security Interests in Personal Property § 41.7, at 1105 (1965).

[88] See generally John Murray, Jr., *supra* note 21, at 412; and Paul L. Joskow, *supra* note 2, at pt. II.

[89] John Murray, Jr., *supra* note 21, at 412.

[90] See U.C.C. §§ 2-319, 2-509, 2-510, and § 2-615, Comment 9, *supra* note 80.

[91] U.C.C. § 2-319.

[92] A shipment contract will often contain the clause "F.O.B. seller's place of business," while a destination contract will often contain the clause "F.O.B. buyer's place of business." See U.C.C. § 2-504.

destination. This rule will in the usual case place the risk on the superior risk bearer. The problem dealt with by the rule is that of losses in transit and the Code in effect places the risk of that loss on the party arranging for the transportation of the goods.

In sum, the Uniform Commercial Code has not greatly affected the common law discharge doctrines.

D. *Doubtful Cases*

In many individual, and perhaps some classes of, cases economic analysis—at least of the casual sort employed by the judges and lawyers in contract cases—will fail to yield a definite answer, or even a guess, as to which party is the superior risk bearer. A good example is provided by the coronation cases.[93] Neither party was in a superior position to foresee the event (the illness of Edward VII) that prevented completion of the contract. To be sure, the building owner had a superior ability to compute the loss, which depended on his ability to rerent the rooms on short notice, and could in principle have bought a single insurance policy on Edward's health at lower cost than the renters could have insured. However, the renters may well have been superior self-insurers: enforcing the contracts would have spread the loss among a relatively large number of renters rather than concentrate it on a relatively few building owners. It is not surprising that the courts divided on whether discharge should be allowed.[94]

The choice in doubtful cases between treating nonperformance as breach or as discharge is similar to the choice in tort law between strict liability and no liability for unavoidable accidents.[95] Pending definitive empirical study, we are inclined to consider the strict-liability solution better in the contract context, though in the tort context the choice must be considered indeterminate on the basis of present knowledge.[96]

The performing party to a contract is generally the superior risk bearer. Typically, though not invariably, he is better able both to prevent the occur-

[93] See note 8 *supra*.

[94] Compare Krell v. Henry, [1903] 2 K.B. 740 (C.A.), with Chandler v. Webster, [1904] 1 K.B. 493 (L.R.), and Herne Bay S.S. Co. v. Hutton, [1903] 2 K.B. 683 (C.A.); but see note 106 *infra*. While the coronation cases on their peculiar facts could have gone either way on an economic analysis—which may explain the division in the courts—the case against discharge is much stronger in the related but more common case where, for example, a skier books a room at a ski lodge and, having paid his deposit, seeks a refund because of poor ski conditions. Skiers as a class are superior self-insurers against poor ski conditions compared to ski lodges; the skier can find adequate conditions somewhere but the lodge cannot diversify away the risk of poor conditions (save by merger with lodges in other ski areas); market insurance may also be unavailable. (Other part-payment cases are discussed at pp. 115-17 *infra*.)

[95] See Richard A. Posner, Strict Liability: A Comment, 2 J. Leg. Studies 205 (1973).

[96] *Id.*

rence of the event rendering performance uneconomical and, if it cannot be prevented at reasonable cost, to estimate the probability of its occurrence. Often, too, he is at least as able as the payor to estimate the magnitude of the loss if the event occurs. True, the payor (that is, the buyer) will have better knowledge of the consequences of nonperformance for his business, but the rule of *Hadley v. Baxendale* properly assigns the risk of consequential injury to the payor in any event. Finally, the performer can often self-insure at low cost simply by diversifying the risk across the full range of his contractual obligations.

The performer is not always the superior risk bearer; otherwise there would be no place in contract law for impossibility and related doctrines. But as long as the performer is *generally* the superior risk bearer, assigning the risk to him in cases of doubt—that is, refusing discharge in those cases—can be expected to yield correct results more often than the contrary rule. Accordingly, one is not surprised to find that the courts indeed treat discharge as an excuse, so that nonperformance is a breach of contract unless the case fits one of the exceptions to liability carved out by the impossibility or some other excuse doctrine.

This discussion raises the broader question why in general notions of strict liability seem much more important in contract than in tort law. The concept of breach of contract is one of strict liability rather than of negligence. The difference in this regard between tort and contract law appears to be related to the fact that tort cases typically involve interactive activities and contract cases typically do not. An automobile accident, for example, is produced by a collision between two automobiles or between an automobile and a pedestrian, and there is no presumption that the injurer could have avoided the accident more cheaply than the victim. But in the typical contract case the only relevant actors are performer and payor and the productive activity under the contract is controlled and conducted entirely by the former. There is a strong presumption therefore that he is better able than the payor to prevent a mishap that will render performance uneconomical. The presumption is not absolute but it is sufficient to make strict liability the appropriate general rule defining breach of contract.

III. Remedial Consequences of Discharge

Thus far we have treated the discharge issue dichotomously, as if the only choice were between on the one hand enforcing the contract and awarding full contract damages, and on the other hand discharging the contract and awarding no damages. This dichotomous treatment is not inevitable. Intermediate solutions are possible and have seemed appealing to many commentators on the impossibility doctrine.

A. *The General Case*

In a famous article Fuller and Perdue identified two components of the contract price: the reliance interest and the expectation interest.[97] The reliance interest represents the expected cost of performance, the expectation interest the expected profit from performance. If A contracts to repair the roof of B's home for $2000, A's expected cost of (say) $1500 would be his reliance interest and the difference between the contract price and his cost—$500—would be his expectation interest. If B breached the contract before A had begun to perform—for example, after A had purchased $700 worth of materials usable only on B's roof—A would claim as damages the sum of his expectation and reliance interests ($1200), A being entitled to receive a profit of $500 regardless of the time of B's breach.

The question relevant to discharge is what happens under a similar fact pattern if the event terminating the contract is deemed to have effected a discharge rather than a breach. Suppose that without negligence on anyone's part a house is destroyed by fire while under repair, and the repair contractor sues for breach. Unless there is a specific contractual provision assigning the risk to the homeowner, the courts hold that the repair contract is discharged.[98] The result appears to be sound when analyzed in an economic framework. The relevant loss is the sum of the expenses incurred (the reliance loss) and the opportunity value of the contractor's services (approximately equal to the expectation loss).[99] The magnitude of loss is presumably better known to the contractor. He has superior knowledge both of the value of the reliance loss (which depends critically on his cost schedule as a function of the stages of repair and the costs of the various inputs) and of the opportunity value of his services. Although the ability to estimate the probability of the loss will depend to some extent on the specific event giving rise to discharge, in the typical repair situation neither party has a superior ability to estimate that probability. The owner of the premises has custody, of course, but the contractor may know a good deal more about fire and other hazards that might prevent performance.

As for the remedial consequences of discharge, the contractor is entitled to no part of his lost expectation interest—this distinguishes discharge from breach. Nor can he recover his reliance losses. He would be entitled to recover in a restitution action the value of any actual benefits conferred upon

[97] L. L. Fuller & William R. Perdue, Jr., The Reliance Interest in Contract Damages, 46 Yale L.J. 52, 373 (1936-37).

[98] See, for example, Young v. City of Chicopee, 186 Mass. 518, 72 N.E. 63 (1904); and Carroll v. Bowersock, 100 Kan. 270, 164 P. 143 (1917), discussed in text at note 107 *infra*.

[99] The relationship between opportunity costs and the expectation interest varies over time; the two concepts are approximately equal when performance is nearly complete. See John H. Barton, The Economic Basis of Damages for Breach of Contract, 1 J. Leg. Studies 277 (1972).

the owner but these may be slight, depending on the completeness of the destruction.

Many legal commentators are distressed by this outcome because it places the entire loss on the contractor. Their failure to understand the efficiency basis of the discharge doctrine leads them to view the remedy issue as separable from that of liability and to argue that it is "only fair" to apportion reliance losses.[100] Typical of many proposals is the following:

> . . . [S]ince the fortuity of actual reliance expenditures provides no generally applicable guides for the placement of loss, it seems fairest to split loss according to equal innocence. . . . Apportioning these losses marks the minimal change in present law necessary to systematize somewhat the treatment of loss after discharge of burdensome contracts.[101]

The proposals to change the remedial outcome to one where reliance losses are shared result from a misplaced emphasis on ex post loss distribution rather than ex ante risk bearing.[102] Viewed from the risk-bearing perspective the refusal to apportion reliance losses is well founded; it creates an incentive for the more efficient risk bearer to adopt cost-justified risk-avoidance or risk-minimization techniques (diversification, market insurance, or whatever). The existing rule whereby discharge results in zero damages (save where restitution is appropriate) is analogous to the approach of the tort law. There too the focus is on determining which party, the plaintiff or defendant, is the lower-cost avoider of the event in question, and it is clearly not proper to approach the question by attempting to ascertain which party is in a better position ex post to bear the loss.

The ex post approach to risk assignment is in fact circular. Often the party who ex post is the superior risk bearer is the party who purchased an insurance policy covering the risk in question. But if this were the criterion of liability, it would give parties an incentive not to insure, for by not insuring they would increase the possibility that the court would assign the risk to the other party to the contract. So neither party might insure; or, fearing this possibility, both parties might insure. Neither result would be optimal.

The 50-50 loss-sharing approach favored by the commentators is at least superficially appealing in the case where it is difficult for the court to determine which of the parties is the superior risk bearer. If the parties are equally good (or bad) risk bearers, and each is risk averse, then each will prefer ex ante a solution that reduces the variance of the expected outcome of the contract. Splitting the loss does this, so long as each party estimates the same

[100] See Comment, 69 Yale L.J. 1054 (1960); Malcolm P. Sharp, *supra* note 4; Comment, 18 U. Chi. L. Rev. 153 (1950); and Comment, 46 Mich. L. Rev., *supra* note 4, at 401.

[101] Comment, 69 Yale L.J. 1054, 1060 (1960).

[102] See Stephen S. Ashley, *supra* note 2.

probability that the court will assign him the risk.[103] For in that case instead of each party facing some probability of bearing all of the costs of nonperformance each has a certainty of bearing 50 percent of those costs. Of course, if neither party is risk averse, there is no gain from such a rule. And if one party is a superior risk bearer, the *entire* loss should be placed on him in order to encourage future parties similarly situated to insure or take other measures to minimize the economic consequences of nonperformance.[104]

Whether carving out a class of indeterminate risk allocations and applying a rule of 50-50 loss sharing to them can be justified in terms of the administrative costs of seeking in each case (or class of cases) to determine the superior risk bearer may be doubted. It is easy to exaggerate those costs. The costs of deciding a question in a lawsuit ought properly to be apportioned over all future transactions that will be controlled by the rule declared in the suit. Even if it is very expensive to decide in the first case how to assign the risk of some event that renders contract performance uneconomical, once the question is decided and a rule declared, the rule will be available to guide the behavior of future contracting parties and will thus reduce the costs of future contract negotiations. To define a class of cases where the proper assignment of risk is treated as indeterminate could stifle the evolution of rules of risk allocation designed to enhance the efficiency of the contract process.

While 50-50 loss sharing seems an unappealing alternative to the law's solution of placing the loss entirely on one party or the other, in a world where the costs of using the legal system to fill in contract terms were very low a principle of *flexible* loss sharing might be superior to either approach. Loss sharing is a common characteristic of contractual arrangements: one thinks of deductibles and coinsurance in formal insurance contracts, and of joint ventures of all sorts, including sharecropping. Sometimes loss sharing is designed to deal with the moral-hazard problem in insurance; sometimes it is itself the method of insurance, as in sharecropping.[105] But it seems hardly feasible to design a legal rule that will imitate voluntary transacting in all its variety yet be administrable at reasonable cost. Here as elsewhere the law prefers the dichotomous to the continuous solution, presumably because of administrative-cost considerations, thus illustrating the second-best character of legal compared to market resource allocation.[106]

[103] If the parties do not estimate equal probabilities, then 50-50 loss-sharing can be presumed efficient only if the parties are assumed to have identical utility functions. See Alan Schwartz, Sales Law and Inflations, 50 Ind. L.J. 1, 8 n.20 (1976).

[104] The objection to loss splitting in this situation is similar to that to comparative negligence. See Richard A. Posner, *supra* note 2 at 70-71. We note parenthetically that if a rule of loss splitting were adopted there would be no reason we can think of to limit it to the reliance loss.

[105] See Steven N.S. Cheung, The Theory of Share Tenancy 68 (1969).

[106] See Richard A. Posner, *supra* note 2, at 323-34. As a detail, note that the chance of an

A further complication in the discharge remedy area has been created by a misapplication of the common law principle of restitution. In a repair case similar to our last hypothetical the court properly held the contract discharged and overturned an award entered below for full recovery of reliance damages, saying:

> The owner cannot be called on to reimburse the contractor merely because the contractor has been to expense in taking steps tending to performance. . . . It takes something more to make the owner liable for what the contractor has done toward performance. The owner must be benefitted. He should not be enriched at the expense of the contractor. That would be unjust, and to the extent that the owner has been benefitted, the law may properly consider him as resting under a duty to pay . . . . The only basis on which the law can raise an obligation on the part of the owner is the consideration he has received by way of benefit, advantage, or value to him.[107]

This statement makes good economic sense. A rule requiring a party to pay restitution for benefits actually received is consistent with the economic theory of contract law. However, the court went on to hold that materials "worked into" the house prior to the fire, although totally destroyed by it, constituted tangible benefits to the homeowner. Applying this principle, the court allowed the contractor to recover in restitution for work done in removing a floor in a house that shortly afterward was totally destroyed by fire. This result is unsound. The proper measure of benefit is the value to the homeowner during the interval before the fire deprived him of the value of the work. Any greater reward would, by conferring a windfall on the contractor, undermine the determination that he was the superior risk bearer.

B. *Partial Performance*

The remedial questions pertinent to impossibility generally arise in cases of partial performance, as in the repair cases discussed in the previous subpart. Another form of partial performance is part payment. If there has been part payment prior to delivery and delivery is prevented by some catastrophe, the question may arise whether the payee should be required to return all or part of the payment. The answer ought to depend, in an economic analysis, on whether the purpose of the prepayment was to compensate the payee for bearing the risk that something might happen to prevent him from making delivery, or whether the prepayment was unrelated. Suppose in our hypothetical repair case that the homeowner had advanced the repair contractor part of the payment before the latter com-

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erroneous legal judgment introduces an element of risk sharing; as the probability of legal error rises, the legal solution approaches in practice the 50-50 loss-sharing rule advocated by many commentators—though it is ex ante rather than ex post loss sharing that is achieved in this way.

[107] Carroll v. Bowersock, 100 Kan. 270, 274, 164 Pac. 143, 144 (1917).

pleted the repairs. If the purpose of the advance was to compensate the repairer for bearing the risk that fire or some other event would prevent him from completing the repairs, then clearly he is entitled to keep the advance—it is his insurance premium. But the advance may be completely unrelated to such risks. It could be intended to finance the purchase of supplies by the contractor (the homeowner may be the cheapest source of the necessary capital) or to protect the contractor against the risk that the homeowner might be insolvent or otherwise difficult to collect the contract price from. It could be intended simply to avoid, for tax or other financial reasons, a large, lumpy payment at the completion of construction. Given the number of plausible reasons for prepayment that are unrelated to the provision of insurance against an event that may prevent completion of performance, there can be no presumption that prepayment is intended to compensate the performing party for the risk of such an event. Accordingly, in the absence of other evidence that the payor is the superior risk bearer, his prepayments should be returned to him. This is the generally prevailing legal rule.[108]

Where it is the performing party to the contract who has partially completed performance, rather than the paying party, there will often be a valid claim for restitution (for example, where a contract to deliver 10,000 widgets is terminated after 1,000 have been delivered), even if the performer is deemed the superior risk bearer. But where there is no basis for restitution—no value conferred on the other party to the contract by partial performance—neither is there any good economic argument for redistributing the loss between the parties. The loss should then fall entirely on the superior risk bearer.

A concept related to restitution which courts have also used in these cases is that the "divisible contract." If an event giving rise to discharge prevents the completion of a performance that has begun, payment of the completed portion of the performance will be held to be due if that portion is deemed divisible, and the recovery may include a pro rata portion of the performing party's expectation interest as well as its reliance loss. For example, in one well-known case a steamship company had contracted to supply a given number of trips at a fixed rate per trip to be paid monthly. When the

[108] See 6 Arthur Linton Corbin, *supra* note 6 at §§ 1972-1977. In many deposit situations, of course, it is understood that the payor has the right to cancel but not to recover his deposit (*e.g.*, resort bookings). Here the discharge question does not arise.

Perhaps the *Chandler* case, note 94 *supra*, can be distinguished from those coronation cases allowing discharge on the ground that the contract in *Chandler* required full payment in advance. The unusual character of the payment term arguably justified the court in concluding that the cancellation of the procession was not intended by the parties to discharge the payor's obligation. In our terms, the absence of any other apparent reason for requiring full payment in advance permitted the inference that the purpose was to insure the payee against the risk of an event that would make performance uneconomical.

steamship was destroyed by fire, the contract was held to be discharged but the steamship company was allowed to recover the agreed-upon rate for each of the trips that had already been supplied.[109] The basic rationale in such cases seems restitutionary, and appears to make good sense. But it would be cleaner to drop the fiction of divisibility and simply to view the contract as discharged, and then decide what compensation is due the performing party for having conferred benefits on the other party to the contract before the event giving rise to the discharge occurred.

Conclusion and Extensions

We have argued that economics provides a useful framework for the analysis of discharge claims. To be sure, only a subclass of potential discharge cases is within the scope of our analysis. Where the terms of a contract assign to one or the other party the risk of loss from a particular event or group of events, those terms control. But it would be a mistake to think that if only we stared hard enough at the words of the contract, all questions of risk allocation would dissolve into questions of interpretation. Interpretation depends on context, and the parties' risk-bearing capacities may be part of the context.

Also excluded from our analysis is the case where the event claimed to work a discharge was preventable by the promisor at reasonable cost; here no further inquiry is justified and the contract should be enforced. The discharge question arises only in those cases where the contract does not assign the risk in question and the event giving rise to the discharge claim was not avoidable by any cost-justified precautions. When these threshold conditions have been satisfied, economic analysis suggests that the loss should be placed on the party who is the superior (that is, lower-cost) risk bearer. To determine which party is the superior risk bearer three factors are relevant—knowledge of the magnitude of the loss, knowledge of the probability that it will occur, and (other) costs of self- or market-insurance.

This analytic framework can be used to guide empirical analysis of discharge cases, though admittedly the empirical methods used in this paper, as in the contract cases themselves, are casual and crude. Their limitations are especially serious in those situations where the relevant empirical factors point in different directions. In the lease area, for example, we were unable to discover whether lessees or lessors should bear the risk of fortuitous events that impair the value of the lease without conducting empirical research of a sort that we hope in future work to pursue in much greater depth. Studies of the provisions of actual contracts may be particularly helpful in determining

[109] Pasquotank & N.R. Steamboat Co. v. Eastern Carolina Trans. Co., 166 N.C. 582, 82 S.E. 956 (1914).

when discharge is efficient. Suppose, for example, that in some class of cases the courts of one jurisdiction allow discharge and the courts of some other jurisdiction do not. Unless there are economic differences between the jurisdictions that make the different rule in each efficient—an unlikely possibility—the rule in one jurisdiction will be the efficient rule, and the rule in the other inefficient. In the jurisdiction that has the inefficient rule, one would expect the parties to contracts to insert a provision reversing the legal rule. Therefore, by comparing contracts across states (or, in some cases perhaps, across countries) it should be possible to determine which rule is the efficient one. This could be a powerful method both of testing the empirical hunches in this paper and of determining the efficient rule in circumstances where the empirical methods used in this paper do not yield even a hunch.

Incomplete as the present paper is, it does provide an analytical framework that transforms a group of seemingly random case holdings into a generally (though not perfectly) coherent array of outcomes. Our analysis suggests, once again, that the common law has an internal economic logic stronger than many legal scholars believe. Moreover, the simple analytic framework that we have fashioned to identify the superior risk bearer in discharge cases could be used to clarify a number of other areas of contract law, and other fields as well. It has long been known that risk allocation is a fundamental purpose of contract and contract law.[110] But, as noted earlier, this insight has remained undeveloped for want of a method of determining which contracting party is the superior risk bearer and should therefore be assigned the risk. If we are correct in our analysis of whether, for example, war should be treated as a ground for discharging a certain class of transportation contracts, then the same analysis should reveal how the risk of war should be assigned in cases involving the pre-existing duty doctrine,[111] or how the risk of an unexpected pregnancy should be assigned in a case involving the purchase of a cow,[112] or how risk should be assigned in any other area of contract law. Furthermore, since issues of risk assignment become important in tort law whenever accidents are not preventable at reasonable cost,[113] our analysis has implications for that body of law as well.[114]

[110] See Edwin W. Patterson, *supra* note 19.

[111] See Listen v. Owners of Steamship Carpathian, [1915] 2 K.B. 42 (H.L.). Cf. Ling v. Schuck, 106 Md. 220, 67 A. 286 (1907) (soil conditions).

[112] See Sherwood v. Walker, 66 Mich. 568, 33 N.W. 919 (1887), discussed in Richard A. Posner, *supra* note 2 at 47-48. The mutual-mistake cases are particularly difficult to distinguish analytically from the impossibility cases. An unexpected-soil-conditions case, for example, such as *Hein v. Fox, supra* note 51, could equally well be regarded as a mutual-mistake case.

[113] See Richard A. Posner, *supra* note 95 at 210.

[114] Guido Calabresi, in The Costs of Accidents (1970), while pointing out that risk reduction is a goal of accident law, does not consider the problem of determining which party to the accident is the superior risk bearer, *i.e.*, can insure at lower cost. See *id.* at 46-67.