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THE ECONOMIC IMPLICATIONS OF THE
DOCTRINE OF IMPOSSIBILITY

If one accepts as a norm Cardozo’s maxim that “[t]he final cause of law is the welfare of society,” economic theory may provide a useful basis for evaluating the social consequences of legal doctrines. This note will demonstrate the usefulness of applying an economic analysis to the doctrine of impossibility of contract performance, the legal principle applied to contract disputes which arise when an unforeseen catastrophe prevents performance of a contract whose terms do not allocate the risk of that catastrophe. The traditional legal analysis, by limiting its view to the allocation of losses which have already occurred and by ignoring the problem of assigning the risk of future losses, has produced inconsistent and arbitrary risk assignments, to society’s detriment. The proposals of other legal writers would have the same effect. This note will demonstrate through an economic analysis that the law should allocate the risk of disruption unequivocally to the party better able to insure against the risk, subject to reassignment by the parties in their contract.

Economic Efficiency and the Legal Norm

To show that Cardozo’s maxim is valid, one may begin with the question: Why should the government enforce promises? Without courts to enforce contracts and with no guarantee that a promisor will keep his promise, only people with a reputation for keeping their promises may enjoy beforehand the value of their future performance. No one would pay as much for a promise of performance as he would for a performance already rendered if he knew he could not collect damages for nonperformance. On the other hand, when courts enforce contracts, a party may enjoy the full present value of his future service because enforcement secures promises and makes them valuable. Governmental enforcement of promises makes everyone better off by increasing the present value of future obligations. It would appear, then, that contract enforcement is justifiable at least on the grounds that it improves the lot of those persons it affects.

This apparent legal norm—that contract law should make people generally better off—has an economic analogue in the concept of

economic efficiency. Suppose that all the resources in society are re-
distributed. Economists describe the new distribution as more eco-
nomically efficient than the old one if it increases at least one person's utility—the degree of satisfaction he derives from his possessions—without decreasing anyone else's. In a perfectly efficient distribution no one's utility can be increased without decreasing someone else's. Although utility extends beyond physical goods and money and includes any scarce commodity, such as clean air, leisure time, or even freedom, in commercial contexts it is convenient to equate utility with wealth. Economic efficiency is the same concept as the legal norm of contract law derived earlier, with two important limitations. First, utility depends on each individual's perception of the satisfaction he derives from his possessions. Economics does not indicate when another is made better off: the concept of efficiency leaves that decision to each individual. Second, the criterion of economic efficiency excludes from consideration resource redistributions which make a person better off at anyone else's expense. In such a case one must decide upon some other basis that the new distribution is more just, fair, or equitable. Though economic theories do not indicate that a distribution making everyone better off at someone else's expense is just, neither do they indicate that such a redistribution is unjust. The subject is simply beyond the scope of economic inquiry.

The important conclusion to draw from the comparison of the concept of efficiency with the legal norm for contract law earlier derived is that a contract principle is justified whenever its operation produces a more efficient distribution of resources. To say that a legal doctrine is economically efficient is to say that that doctrine makes society better off.


3. A. Alchian & W. Allen, University Economics 47-49 (3d ed. 1972). Another term for economic efficiency is Pareto optimality. H. Raiffa, Decision Analysis 199 (1968). If, in a refugee camp, B has one cigarette and one candy bar, and if A has nineteen of each, the distribution is probably fairly efficient since there are few exchanges of cigarettes and candy bars which would make B happier without making A less satisfied. If A has twenty candy bars and B has twenty cigarettes, the distribution is probably inefficient because each would probably feel happier after several exchanges of cigarettes for candy bars. Economics indicates in objective terms that the first distribution is more efficient than the second, but whether one says that the second is fairer because the wealth is divided roughly in half depends on one's subjective notion of justice.

4. M. Friedman, The Methodology of Positive Economics, in Essays in Positive Economics 3 (1953). In proposing that courts consider economic criteria in reaching decisions, the author recognizes that in certain cases the court will determine that equitable considerations prevail over what it perceives as the remote economic values resulting from a clear judicial assignment of the risk. Analysis of the relation of economic efficiency to justice must be reserved for consideration at a later time.
The Traditional Legal Approach to the Impossibility Cases

The impossibility cases are those which arise when an unforeseen event makes performance of a contractual obligation by one party extremely burdensome. The legal tool traditionally applied to these cases is known as the doctrine of impossibility. Suppose A, who owns developed land, rents a building on the land to B. The contract does not indicate who bears the risk of a catastrophe, and the building collapses in an earthquake. Who should bear the loss? If a court discharges B from performing his contractual obligation because of the catastrophe, the court deprives A of his rent. If the court holds B to his bargain, the judgment forces him to pay for something he never received. This example reveals the paradox.

The early English courts held that catastrophes which prevented contract performance did not excuse the promisor from liability for failing to perform. In Paradine v. Jane a lessee tried to excuse his failure to pay rent on the ground that the invasion of the country by a foreign enemy had prevented him from using the leased premises. The court apparently held the defense insufficient because the ancient principle of pacta observanda sunt—agreements are to be observed—stood in the way of discharging the promisor. The court stated that if the lessee had wanted to make his promise of rent conditional, "he might have provided against [the risk of disruption] by his contract." Though dictum denying any defense of impossibility probably did not accurately reflect English law even then, the case has often been cited

5. See 6 A. CORBIN, CONTRACTS § 1320 (rev. ed. 1962) [hereinafter cited as CORBIN].
6. See id.
7. It is important to keep in mind the difference between excusing liability for failing to perform and excusing performance. Some writers seem to confuse the two, treating the doctrine of impossibility as the only means to avoid compelling the promisor to do something dangerous, futile, or illegal: "The outcome of these cases is in practice dictated by a shifting line of compromise between the impulse to uphold the sanctity of business agreements and the desire to avoid imposing obligations that are vain or unduly burdensome." Fuller & Perdue, The Reliance Interest in Contract Damages (pts. 1-2), 46 YALE L.J. 52, 373, 379 (1936-1937) (emphasis added); see, e.g., 41 TUL. L. REV. 709 (1967). Obviously, if the court denies a promisor's plea of impossibility, the court is not therefore going to compel him to endanger himself or to do something useless or illegal. Such a denial simply imposes on the promisor the loss to the promisee's expectation interest (see text accompanying notes 61-62 infra) caused by the promisor's inability to perform. In Takahashi v. Pepper Tank & Contracting Co., 58 Wyo. 330, 131 P.2d 339 (1942), the court refused a decree of specific performance where the performance sought had become illegal but indicated that damages in such a situation might still be appropriate.
9. Id.
as an example of the attitude of the English law that contract obligations are absolute.\textsuperscript{11}

The landmark case of *Taylor v. Caldwell*\textsuperscript{12} provided the exception to the *Paradine* rule of absolute liability for nonperformance of contracts. The defendant rented a music hall to the plaintiff; then, through the fault of neither party, fire destroyed the hall. Because the parties must have known that they could not perform their contract obligation without the hall, Judge Blackburn held that the fire excused the parties' liabilities on the basis of an "implied condition" in the contract that the parties would be bound only if the hall remained standing.\textsuperscript{13} This expedient absolved the judges from making a new contract for the parties, a responsibility which the common law judiciary was reluctant to undertake. Blackburn in effect said that discharging the promisor would, indeed, give effect to the parties' contract because the parties had intended their performance to be conditional although they had not put the condition in the writing. This reasoning gave the appearance of faithfulness to the old rule while shifting the losses according to a term which the contract, in fact, did not include. By skirting the barrier of *pacta observanda sunt* with his implied condition, Blackburn provided many courts with the rationale they would use to justify the doctrine of impossibility.\textsuperscript{14}

Although legal writers, perhaps inspired by Holmes,\textsuperscript{15} criticized the fiction of an implied condition,\textsuperscript{16} they still tried to justify the doctrine of impossibility as effectuating the intentions of the parties. Woodward proposed allowing the defense only for catastrophes which the

\begin{itemize}
  \item E.g., Kronprinzessin Cecilie, 244 U.S. 12, 22 (1917); Jacobs, Marcus & Co. v. Crédit Lyonnais, 12 Q.B.D. 589, 603 (1884).
  \item Id. at 314.
  \item E.g., Texas Co. v. Hogarth Shipping Co., 256 U.S. 619 (1921); La Cumbre Golf & Country Club v. Santa Barbara Hotel Co., 205 Cal. 422, 271 P. 476 (1928).
  \item "You can give any conclusion a logical form. You always can imply a condition in a contract. But why do you imply it? It is because . . . of some attitude of yours upon a matter not capable . . . of founding exact logical conclusions." Holmes, *The Path of the Law*, 10 Harv. L. Rev. 457, 466 (1897), in *Collected Legal Papers* 181 (1920).
  \item ["The analogy of the implied condition is evidently a fiction which is at best unnecessary and at worst misleading." Note, *The Development of the Doctrine of Impossibility of Performance*, 18 Mich. L. Rev. 589, 598-99 (1920).]
  \item "This 'implied condition' would seem but a poor fiction at best to justify a conclusion reached upon some undisclosed ground." 27 Calif. L. Rev. 460, 461 (1939).
  \item See *Corbin*, supra note 5, § 1322, at 331; 6 S. Williston & G. Thompson, A TREATISE ON THE LAW OF CONTRACTS § 1937 (rev. ed. 1938) [hereinafter cited as Williston].
\end{itemize}
parties "would probably have regarded . . . as so obviously terminating the obligation as not to require expression . . . ." Williston considered the importance factor to be "whether an unanticipated circumstance has made performance . . . vitally different from what should reasonably have been within the contemplation of both parties when they entered into the contract." While these formulations avoided using an implied condition, they did not provide useful criteria for decisions in cases of first impression or explain the judicial process which produced consistent discrepancies among the cases.

An example of such a discrepancy is the anomaly of the building contract cases. If a contractor agrees to build a structure and a catastrophe, such as a fire, occurs on the last day of construction, the doctrine of impossibility does not apply, and the building contractor breaches his contract. If he agrees to repair a structure and a fire occurs on the last day, the doctrine of impossibility does apply, excusing both parties. The only way to reconcile this difference between the contract-to-build cases and the contract-to-repair cases using the Woodward and Williston formulations is to say that when the fire prevented the repair of the building, the parties probably regarded the fire as so obviously terminating the obligation as not to require expression because the fire made performance vitally different from what they originally contemplated. When the fire prevented construction of the building, however, the parties must have regarded the possibility of fire in an exactly opposite manner. Clearly, though, the contemplation of the parties would not differ so drastically between the two situations.

Perhaps a better explanation of the doctrine of impossibility is that it serves not as a legal theory, but as a rhetorical device to justify a particular distribution of losses when the courts have no language in the contract to guide them. Corbin, commenting on _Taylor v. Cald-

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19. _e.g._, W.A. Chapman & Co. v. Montgomery Water Power Co., 126 F. 372 (5th Cir. 1903), _cert. denied_, 192 U.S. 605 (1904); School Dist. No. 1 v. Dauchy, 25 Conn. 530 (1857); Stees v. Leonard, 20 Minn. 448 (1874); Thompkins v. Dudley, 25 N.Y. 272 (1862); _see_ Clark v. Collier, 100 Cal. 236, 34 P. 677 (1893).

20. _e.g._, Young v. City of Chicopee, 186 Mass. 518, 72 N.E. 63 (1904); Haynes v. Second Baptist Church, 88 Mo. 285 (1885).

21. There is a crucial difference between saying, in the contract-to-repair cases, that the parties did not intend for the builder to finish the repair on a destroyed building and that they did not intend for the builder's expectation interest to be protected. The latter does not follow inevitably from the former. The two possible intentions are mutually independent.

well, made the same observation: "But the court knew how the risks of loss in case of such a fire ought to be allocated; and it found an 'implied condition' as a means to serve its end . . . ."23 It would appear that the courts have determined what results should be achieved in the contract-to-repair cases on some other, unspoken ground and use the language of the doctrine of impossibility to justify that result. Thus the judges apparently see no logical inconsistency in applying the doctrine of impossibility in the contract-to-repair cases but ignoring it in the contract-to-build cases, even though the circumstances in the two sets of cases differ only in the respect that a building is to be constructed on the one hand and repaired on the other.

Operation of the Doctrine of Impossibility

Despite its name, the doctrine of impossibility does not require absolute impossibility before liability will be discharged. Nevertheless, the principle does not apply when the added cost of performance due to a supervening event is not extreme.24 The doctrine is inapplicable when the impossibility is subjective, rather than objective,25 or when the defendant knew of the potential disruption or should have foreseen it.26 When a contract allocates the risk of the event to one party or the other, the courts naturally reject the defense.27

Through the doctrine a party may excuse his performance in three situations. In the first he says, "A catastrophe prevented my performance; therefore I should be excused." In the second he says, "A catastrophe prevented his performance; since I won't get what I bargained

23. CoRBIN, supra note 5, § 1322, at 331.
24. E.g., Kronprinzessin Cecilie, 244 U.S. 12 (1917); Mineral Park Land Co. v. Howard, 172 Cal. 289, 156 P. 458 (1916), criticizing in Comment, Contracts: Excuse of Performance by Existence of Condition Causing Unforeseen Expense, 4 CALIF. L. REV. 407 (1916); see CoRBIN, supra note 5, § 1325, at 338; WIL LisTON, supra note 16, § 1931, at 5410-11; ReSTATEMENT, supra note 18, § 281, comment d. See generally Pat-
25. The difference between objective and subjective impossibility is the difference between "it cannot be done" and "I cannot do it." E.g., El Rio Oils (Canada) Ltd. v. Pacific Coast Asphalt Co., 95 Cal. App. 2d 186, 213 P.2d 1 (1949); see CoRBIN, supra note 5, § 1325, at 337 (unfortunately using trip to moon as example of objective impossibility); WIL LisTON, supra note 16, § 1932; ReSTATEMENT, supra note 18, § 281, comment e.
26. E.g., Transatlantic Financing Corp. v. United States, 363 F.2d 312 (D.C. Cir. 1966); cf. Lloyd v. Murphy, 52 Cal. 2d 48, 153 P.2d 47 (1944); see CoRBIN, supra note 5, § 1329; WIL LisTON, supra note 16, § 1959; ReSTATEMENT, supra note 18, § 281, comment d; 41 MARQ. L. REV. 314 (1957-1958).
27. E.g., Day v. United States, 245 U.S. 159 (1917); Depot Constr. Corp. v. State, 19 N.Y.2d 109, 224 N.E.2d 866 (1967); see CoRBIN, supra note 5, § 1328; WIL LisTON, supra note 16, § 1972A; ReSTATEMENT, supra note 18, § 281, comment c.
for, my performance should be excused." In the third he says, "A change in conditions makes his performance worthless to me; therefore my performance should be excused." The courts have applied the doctrine in three types of cases. The first case is supervening legal impossibility, which occurs when a change in the law makes performance either illegal or extremely difficult. The second is impossibility due to the death or illness of an essential person. The third is impossibility due either to the lack of availability of a specific thing necessary for performance or to the lack of a certain arrangement of circumstances necessary for performance. A decision in an impossibility case has two effects: it allocates the losses between the two parties before the court, and, through the effect of stare decisis, it assigns the

28. Corbin, supra note 5, § 1320, at 323. American writers refer to the third excuse as frustration of purpose. Comment, Contracts—Frustration of Purpose, 59 Mich. L. Rev. 98 (1960). But see Anderson, Frustration of Contract—A Rejected Doctrine, 3 De Paul L. Rev. 1 (1953). English writers apply the term to all three situations. For the purposes of this note the distinction between impossibility and frustration of purpose is not important.

Often included as an excuse is the situation in which the impossibility existed at the time the parties made the contract although they were unaware of it. Courts analyze this situation either in terms of the doctrine of mutual mistake of a material fact or of the doctrine of impossibility. Compare Petry v. John F. Buckner & Sons, 280 S.W.2d 641, 643 (Tex. Civ. App. 1955), with Faria v. Southwick, 81 Idaho 68, 72, 337 P.2d 376 (1959); see Williston, supra note 16, § 1933; Annot., 84 A.L.R.2d 12, 31-35 (1962). The Restatement treats the problem of "existing" impossibility in a separate section. Restatement, supra note 18, § 286.

29. A change in domestic law may prevent performance. E.g., Omnia Commercial Co. v. United States, 261 U.S. 502 (1923); Louisville & N.R.R. Co. v. Mottley, 219 U.S. 467 (1911); Stratford, Inc. v. Seattle Brewing & Malting Co., 94 Wash. 125, 162 P. 31 (1916); see Corbin, supra note 5, § 1343; Williston, supra note 16, § 1938. Judicial, executive, and administrative orders may prevent performance. E.g., Texas Co. v. Hogarth Shipping Co., 256 U.S. 619 (1921); see Williston, supra note 16, § 1939. Furthermore, the doctrine has been held to apply when foreign law prevents performance. E.g., Texas Co. v. Hogarth Shipping Co., supra; see Corbin, supra note 5, § 1351. But in other cases the doctrine has been held not to apply when foreign law prevents performance. E.g., Tweedie Trading Co. v. James P. McDonald Co., 114 F. 985 (S.D. N.Y. 1902); see Williston, supra note 16, § 1938. Even if not expressly overruled, these latter cases are no longer authoritative. Mention is made of them to put the reader on notice of their existence. See Restatement, supra note 18, § 284.


risk of future loss to future parties in similar circumstances.

When an American court excuses a promisor from liability for nonperformance, it will generally use a formula for restitution, often based on a theory of unjust enrichment. If a party has partially performed and if the court excuses liability for failing to perform further, the party receives a judgment for the value of the benefit his part performance conferred on the promisee. If a party has fully performed and if the court excuses the other party from further performance, the performing party receives judgment for the value of the benefit conferred on the other. While each performing party may recover the value of the benefit conferred during his performance of the contract, the judgment may not exceed a ratable portion of the contract price.

To deal with the impossibility cases the courts have created a rhetorical device to invoke when, because of some other consideration, they desire to relieve the promisor of liability for not performing his contract. Though that consideration is not articulated, the result of the doctrine is a process of loss reallocation which is extremely complicated and which results in increased uncertainty of outcome in individual cases.

Alternatives Suggested by Other Legal Writers

In fashioning alternatives to the doctrine of impossibility, legal writers have concentrated on the loss allocating effect of the doctrine to the exclusion of the risk allocating effect by attempting to construct fair allocation schemes based on analyses of losses which have already occurred. As will be seen, analyzing any allocation method simply by the way it distributes losses does not yield useful information for deciding which method is preferable. Rather, it will prove more useful to examine how different allocation schemes affect the assignment of the risk of loss in future cases. We will see the difficulty in formulating a sound allocation method based on a loss analysis by examining the allocation alternatives others have proposed.

33. See CORBIN, supra note 5, §§ 1367-72; WILLISTON, supra note 16, § 1977; RESTATEMENT, supra note 18, § 292.
34. CORBIN, supra note 5, § 1372.
37. RESTATEMENT (FIRST) OF CONTRACTS § 468 (1932).
The first recommendation\textsuperscript{38} for reform suggests that when an "impossibility" case comes up, the court should relieve the promisor of liability for not performing and then divide the losses to the parties' contract interests\textsuperscript{39} equally. For example, suppose A hires B to build an elevator in his apartment building and agrees in exchange to furnish B with an apartment. After B has spent $1,000 installing the device and A has spent $200 readying the apartment, a fire destroys the whole building. According to the fifty-fifty approach, each would be liable to the other party for one-half of the other's losses incurred in performing the contract: A would owe B $500 (half of B's $1,000), and B would owe A $100 (half of A's $200), with the result that B could obtain a judgment for $400.\textsuperscript{40} The leading advocate of this approach proposes a statutory scheme for a fifty-fifty division of the losses,\textsuperscript{41} justify his proposal with these reasons:

Because the occasion for discharge is ordinarily an externally caused, unknown, or unanticipated event, neither party will have assumed the risk in the vast majority of cases and neither party will be a "wrongdoer" to whom the court can easily assign responsibility for loss. Thus, only innocent parties will bear losses resulting from a contract discharged as burdensome, and therefore equitable consideration further suggests that at least some . . . losses . . . should be evenly shared.\textsuperscript{42}

This passage is noteworthy in two respects. First, the author justifies his approach simply with the assertion that "equitable considerations" suggest it without providing more specific analysis which would enable one to evaluate the proposal more readily. Second, the author limits his analysis to the distributions of loss resulting from different allocation schemes without considering the resulting distributions of risk in future cases.\textsuperscript{43}

\textsuperscript{38} The reform has been articulated by several writers. Sharp, Promissory Liability, 7 U. CHI. L. REV. 250, 269 (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, 421 (1948); Comment, Loss Splitting in Contract Litigation, 18 U. CHI. L. REV. 153 (1950).

\textsuperscript{39} See text accompanying note 61 infra.

\textsuperscript{40} Comment, Loss Splitting in Contract Litigation, 18 U. CHI. L. REV. 153, 160 (1950).


\textsuperscript{42} Statutory Solution, supra note 41, at 1058-59 (emphasis added).

\textsuperscript{43} That legal writers have reached these conclusions by examining loss alloc-
The second reform advocated simply allows the trial judge the discretion to evaluate and apportion the losses in any manner he deems just.\textsuperscript{44} The English Law Reform (Frustrated Contracts) Act\textsuperscript{45} so provides. This loss allocation scheme also precludes any consideration of how future risks should be assigned.

Another commentator, Schlegel, advocates a third reform:\textsuperscript{46}

I would like to suggest that, where an unusual event occurs and [impossibility] is alleged, contracts should be enforced only when the contract in question is essentially similar to the archetypical contract situation: the contract between brokers, each essentially speculating on a narrowly fluctuating market. . . . [E]ssential reliance damages . . . as well as the cost of any partial performance, should be split between the parties. Thus, an event should be held [as rendering performance impossible] 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. Further, as the size of the loss increases, the courts should be more willing to shift part of it . . . .\textsuperscript{47}

The notable feature of Schlegel's approach is that, besides adopting the preceding two reforms, he suggests a vastly increased liberality in the discharge of contracts.

Birmingham, a commentator who attempted to apply an economic analysis to the impossibility cases which arose when the Suez Canal was closed,\textsuperscript{48} has offered a fourth alternative.\textsuperscript{49} He argues that in the case of a contract for the sale of goods, if the catastrophic event which prevents the seller from shipping the goods also causes the price of the goods in the buyer's port to rise, then the added cost due to the event should be imposed on the buyer, who presumably will not be harmed since he can resell at the higher market price.\textsuperscript{50} For example, if a selection is most dramatically evident where an author rejects altogether the concept of risk allocation: "But the idea [of risk allocation] is not strictly accurate. Normally we think of risk in terms of an unknown. It is out of line with this usage to say that a court can 'assign' or 'allocate' the risk of an event which has occurred [sic] and of which all the parties are aware. It is a certainty rather than a risk with which we are concerned." Comment, \textit{Quasi-Contract—Impossibility of Performance—Restitution of Money Paid or Benefits Conferred Where Further Performance Has Been Excused}, 46 \textit{Mich. L. Rev.} 401, 406 n.13 (1948). Although the court cannot assign the risk in the case then before it of an event which has already occurred, through the operation of stare decisis the decision of the court may have the effect of allocating the risk in future cases with similar facts.

\textsuperscript{44} \textit{Statutory Solution, supra} note 41, at 1086.
\textsuperscript{45} 6 & 7 Geo. 6, c.40 (1943).
\textsuperscript{46} Schlegel, \textit{supra} note 41.
\textsuperscript{47} \textit{Id.} at 447-48 (citation omitted). The author here is speaking of "frustration" as English writers use the term. See note 28 \textit{supra}. American courts in this context would probably use the term "impossibility."
\textsuperscript{48} See notes 81-84 & accompanying text infra.
\textsuperscript{49} Birmingham, \textit{supra} note 41.
\textsuperscript{50} \textit{Id.} at 1412-16.
ler of goods grown or manufactured south of a canal makes a contract with a buyer north of the canal, and if the canal later closes, then the liability of the seller for not delivering the goods would depend at least in part on the effect of the closing on the market price of the goods in the buyer's town. If the market price went up by an amount equal to the added cost due to more expensive transportation around the canal, then the court, Birmingham suggests, should discharge the seller and force the buyer to pay the additional shipping costs by going into the market to buy substitutes. The market price of the goods in the buyer's port would presumably reflect the additional costs of transportation. All these suggestions have certain shortcomings. Ordering the trial judge to apportion the losses according to the equities of each particular case begs the question of what is a wise way to divide the losses and leaves the answer to the judge's subjective and unspoken notions of justice. The reforms incorporating loss shifting (the fifty-fifty approach) or the liberal discharge of contracts (Schlegel's approach) fail to state why it is just to allocate losses in these manners, and their authority would seem to be no greater than that of any other bald assertion that a particular result is fair or just.

Birmingham's proposal has two practical drawbacks. First, it too fails to indicate why it is unfair to hold the seller to his bargain when the disrupting event causes windfall profits to the buyer. Second, it only applies when the event creating the impossibility also affects the market price of the goods to be delivered: a fire which burns down one house, for example, usually does not affect the price of houses generally.

Birmingham's proposal, which he purportedly based on an economic analysis, is subject to further objection on theoretical grounds. The author concludes that "a deeper probing of the economic consequences of the unexpected occurrence forming the basis of claims of [impossibility] will frequently lead to revised calculations concerning the amount of resulting gain or loss . . . ." This much may be true, but he errs when he suggests that some economic theory or concept will "offer new guidelines for . . . distribution [of the resulting gain or loss]." No economic theory indicates that any distribution of wealth is more just than any other. Since the author bases his arguments

51. Id.
52. Id.
53. Id. at 1415. The author here is speaking of "frustration" as English writers use the term. See note 28 supra. American courts in this context would probably use the term "impossibility."
54. Id.
55. See note 4 & accompanying text supra.
on an economic analysis, if he wishes to show that economic criteria will offer new guidelines, he must show some logical connection between the economic consequences of a particular disruption and his objective criterion, which, in economics, is efficiency. However, as a leading commentator has shown, efficiency is achieved whichever way the law allocates the risk of loss.\textsuperscript{56}

Any analysis based solely on scrutiny of loss allocations after the losses have occurred must produce arbitrary results. Any scheme of loss allocation in impossibility cases will make one party richer and the other party poorer, each by the same amount. The observation was made earlier that governmental intervention in the affairs of private parties to a contract is justifiable when that intervention improves the lot of those it affects.\textsuperscript{57} This justification is absent in a contract doctrine which improves the lot of one individual at the expense of the other. One must look beyond an analysis of losses to find useful information with which to evaluate any loss allocation scheme.

\textbf{An Economic Analysis: Allocation of Risks Rather Than Losses}

Examining the doctrine of impossibility in terms of economic efficiency indicates again that any comparison of loss allocation schemes will yield no useful information regarding the efficacy of the alternatives if the analysis is limited to past losses. Efficiency means making people better off without making anyone worse off in the process.\textsuperscript{58} The concept of efficiency has no relevance to any scheme of allocating past losses because any change beyond leaving the losses where they lie makes one party richer at the other's expense. The peculiar nature of this notion of efficiency means that to the economist losses which have already occurred are "sunk" costs,\textsuperscript{59} and it is of no interest to him who ultimately bears them. The economist is more interested in how the law assigns the risks of future loss.\textsuperscript{60}

Before shifting attention away from the loss allocating effects of


\textsuperscript{57} See text accompanying notes 1-2 supra.

\textsuperscript{58} See text accompanying note 3 supra.

\textsuperscript{59} R. Posner, \textit{Economic Analysis of Law} 7 (1972) [hereinafter cited as Posner]. The author notes: "Not only are justice and fairness not economic concepts, but the economist is not interested in the one question that concerns the victim and his lawyer: who should bear the costs of this accident? To the economist, the accident is a closed chapter. The costs that it inflicted are 'sunk' costs that cannot be retrieved by a transfer payment from the injurer to the victim . . . . The economist is interested in methods of preventing future accidents and thus reducing costs . . . . The decision in the case will affect the future, and so should interest the economist, because it will confirm or establish a rule for the guidance of people . . . ."

\textsuperscript{60} Id.
different allocation schemes to their risk allocating effects, one must define the interests a contract creates in order to see how the various allocation schemes affect those interests. Suppose $A$ hires $B$ to build an apartment building on $A$'s land, $A$ to pay $B$ two progress payments, one on signing and the other on completion. Further suppose that $A$ can rent his land unimproved for $P_1$ dollars per year and that with the improvement he can rent it for $P_2$ dollars per year. They agree that $B$ will build the apartment for $C_1$ dollars; $B$ anticipates that construction will cost him $C_2$ dollars, the present value of $C_2$ being smaller than the present value of $C_1$. $A$ enters the bargain because he anticipates a gain from the increased present value of future rents of the improved property over the present value of such rents of the unimproved property, $P_2 - P_1$, discounted over time. $B$ enters the agreement because he expects a gain in the difference between the contract price and his costs, $C_1 - C_2$. Legal writers call these sums the parties' expectation and reliance interests:

$A$'s expectation interest is his expected net revenue from renting improved land, or $P_2 - P_1$, discounted over time. $B$'s expectation interest is his anticipated net revenue from performing the contract, $C_1 - C_2$. $A$'s reliance interest, the amount he invests in furthering his own contract performance, is the contract price, $C$. $B$'s reliance interest is his cost of construction, $C_2$.

Should a breach of the construction contract occur, a court's choice of whether or not to apply the doctrine of impossibility or any other allocation scheme would affect the parties' contract interests.

We can contrast these effects by comparing a situation in which the doctrine is not applied with one in which it is. Suppose that a fire completely destroys $A$'s apartment building the day before promised completion. $A$ sues $B$ for breach of contract, and $B$ defends on the ground of impossibility and counterclaims for the final progress payment, $C_1/2$, on the ground that if the court denies his plea of impossibility, it should rule that he substantially performed. The court's choice of how to allocate the losses to $A$'s and $B$'s contract is limited to three options. First, it can hold that the doctrine of impossibility does not apply when a fire prevents a builder, such as $B$, from finishing the building on time; this allocation has the effect of assigning the risk of future fires to future builders and of securing owners from the risk of fire. Second, the court can hold that $B$ substantially performed and that the doctrine of impossibility does not excuse an owner, such as $A$.


62. Some writers refer to the amount a party invests in expectation of contract performance which does not further his own contract performance as the "incidental" reliance interest. If $A$ spent $P_3$ dollars to advertise the improvements to his land, this would be his incidental reliance interest. Statutory Solution, supra note 41, at 1055.
from paying the contract price for his destroyed building; this allocation secures builders from the risk of fire and assigns that risk to future owners. Third, the court can hold that the doctrine of impossibility does apply and excuse performance on each side, allowing restitution by some formula. Giving a party risk security, thus securing him from a particular risk, is like giving him a scarce resource at the expense of the other party. When a court assigns the losses to builders, for instance, it assigns a valuable property in the form of risk security to owners.

Of the three different allocations, the American courts have chosen the first one with respect to catastrophes which prevent construction: a builder breaches his contract if a fire prevents him from finishing a structure on time. The courts refuse to apply the doctrine of impossibility to excuse the builder but give owners security from the risk of fire until completion. Assuming the amounts are sufficiently definite and foreseeable, A would be allowed to recover from B his lost anticipated net revenue (P₂ - P₁, discounted over time), as well as the cost of rebuilding. Since P₂ - P₁, discounted over time, represents A's expectation interest, securing A from the loss protects his expectation interest. In this case the court's refusal to allow the defense of impossibility protects the owner's expectation interest and gives to future owners the valuable property of risk security while imposing on future builders the cost of that risk.

What happens when the doctrine of impossibility is applied? The consequences can be seen by examining the contract-to-repair cases. If, in the example, B had promised to repair A's apartment rather than to construct a new one, American courts would rule that when fire prevented B from performing, his performance was excused. A's performance likewise would be excused, since the performance he had bargained for would not be forthcoming. In effect, the courts have chosen the third allocation scheme mentioned above. The question of the recovery allowable remains a complicated problem.

Recall that when the doctrine of impossibility is applied, each party may recover from the other the value of the benefit his part performance conferred on the other. In the hypothetical case posed

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63. See text accompanying notes 33-37 supra.

64. See cases cited note 19 supra.


67. See text accompanying note 61 supra.

68. See cases cited note 20 supra.

69. See text accompanying note 28 supra.

70. See text accompanying notes 33-37 supra.
above, the value to $B$ of $A$'s part performance would always equal the amount of the first progress payment, $C_1/2$. The value to $A$ of $B$'s part performance would depend on how much of the improvement $B$ had completed before the fire occurred. If $B$ had virtually finished the repair, the value to $A$ of $B$'s part performance would be the price of the repair, $C_1$. If the fire occurred before $B$ began adding the building materials to $A$'s structure, a court would hold that $B$'s part performance did not benefit $A$ because $B$ added nothing to $A$'s land.\textsuperscript{71} If the fire occurred when the repair was virtually complete, the value to $A$ of $B$'s performance would be the contract price, $C_1$, less the first installment, $C_1/2$, which represents the value to $B$ of $A$'s performance. $B$'s recovery, $C_1/2$, plus the first installment equals the contract price, which is exactly what $B$ would have recovered had the courts refused to apply the doctrine of impossibility and merely assigned to builders security from the risk of loss to their expectation interests under the second allocation. Under either rationale for deciding the cases, the judgment would protect $B$'s expectation interest.

On the other hand, if the fire had occurred before $B$ began adding building materials to $A$'s structure, $A$ would have received nothing of value from $B$, but $B$ would have received the first progress payment, $C_1/2$, from $A$. Thus, $A$ would have a judgment for this amount. If the courts, in the contract-to-repair cases, had assigned to future owners security from the risk of loss to the builders' expectation interests, $A$ would have had the same judgment. Under either rationale for deciding cases, when the fire occurs before the repair is begun, $B$'s expectation interest would not be protected.

A comparison of the effect of applying the doctrine of impossibility

\textsuperscript{71} E.g., Young v. City of Chicopee, 186 Mass. 518, 72 N.E. 63 (1904). The concept of restitution just for work and materials incorporated in the building has not been favored by courts and writers. Corbin and Williston have to go to some length to justify it. \textit{See Corbin, supra} note 5, § 1372; \textit{Williston, supra} note 16, §§ 1976-77. An interesting series of cases presented the issue to the Massachusetts court after a general building contract had been declared void. Several subcontractors had made extensive preparations, but few materials had been assembled or incorporated in a building. In M. Ahern Co. v. John Bowen Co., 334 Mass. 36, 133 N.E.2d 484 (1956), the court allowed a subcontractor to recover the value of labor and materials apparently assembled under the plumbing subcontract. In Boston Plate & Window Glass Co. v. John Bowen Co., 335 Mass. 697, 141 N.E.2d 715 (1957), the plaintiff, realizing that he had installed no windows (and thus that the defendant had not been "benefited"), brought an action for breach of contract, but the court denied recovery. In Albre Marble & Tile Co. v. John Bowen Co., 338 Mass. 394, 155 N.E.2d 437 (1959), the plaintiff faced a similar situation but brought an action for the value of the preparatory work. The court allowed recovery, even though the real estate had not been "benefited," on the ground that while the defendant's conduct was not a breach of contract, it was sufficiently blameworthy to allow the plaintiff to recover preparation expenses not benefiting the defendant. The court distinguished the earlier cases on the ground that in \textit{Albre} the contract terms specified the preparatory work necessary for performance.
bility, illustrated in the contract-to-repair examples, with the effect of not applying the doctrine, shown in the contract-to-build illustrations, shows that when the court does not apply the doctrine, the parties' contract interests are well defined: risk security is clearly associated with owners' contract interest in every case, and the owners' expectation interests are always protected. When the court applies the doctrine of impossibility, as in the contract-to-repair examples, the parties' contract interests are vaguely defined. On the one extreme, when the repair is complete, the builders' expectation interests are protected; on the other extreme, when the repair is just begun, the builders' expectation interests are not protected. The only distinguishing factor is the stage of completion the repair has reached when the fire occurs.

Since the rate at which materials will be incorporated into a building depends on eventualities the parties cannot foresee, the degree to which the parties are exposed to the risk of the fire is uncertain. In the face of this uncertainty the parties may well insure against a portion of the risk twice by duplicating insurance coverage. The total cost for insuring for both parties will be greater than if the whole risk is borne, and insured, by one party. This uncertainty could be completely eliminated by associating risk security in the contract-to-repair cases consistently with either party's interests, instead of applying the doctrine of impossibility. If this were done, the restitution schemes made necessary by the doctrine, along with their concomitant ambiguities, could be avoided.

No economic theory holds that weak definition of contract interests, such as occurs when the doctrine of impossibility is applied, is in itself undesirable. The limit of economic inquiry is whether weak definition of such interests produces economic inefficiency. 1

A distribution of goods is economically efficient when it is not possible to improve any individual's utility except at someone else's expense. 2 Ronald H. Coase, in an important article, showed that when the law assigns rights and duties, it does not matter from the point of view of economic efficiency to whom the law initially assigns them. 3 As long as the law assigns the risk squarely to someone, the combined wealth of the parties will be maximized. Although Coase illustrates his theorem with an analysis of rights in real property and the risk of

72. See note 4 supra.
73. See text accompanying note 3 supra.
74. Coase, The Problem of Social Cost, 3 J.L. & ECON. 1 (1960). Coase derives this result using the case of tort liability for damage caused by wandering livestock. He shows that as between a rancher who raises livestock and a farmer who raises corn, no matter which one bears the risk of damage to the farmer's corn due to the rancher's wandering livestock, corn and cows will each be produced at an efficient rate. Id. at 2-8.
a particular nuisance, his conclusions would appear to apply as well to contract interests and risks of disruptions.

Let us apply Coase's theorem to the building contract situation hypothesized earlier. Suppose that for some time the government has been insuring builders and owners against the risk of fire. Given the elimination of this risk, the responses of builders and owners to the economic environment can be depicted with supply and demand curves, as shown in the figure below. The horizontal axis denotes numbers of houses built, the vertical axis denotes the selling prices of one house. The curve $D_1$ depicts the number of houses which consumers would purchase at any given price; $S_1$ depicts the number of houses the construction industry would offer to build at any given price. As the price goes up, fewer consumers would be willing to purchase houses, satisfying their desire for shelter from some other source; at the same time, builders would be willing to supply more houses, transferring building resources from less profitable projects to home building. The market will eventually arrive at equilibrium at the intersection of $S_1$ and $D_1$ (point X), with price per house equal to $P_1$ and the number of houses purchased equal to $Q_1$.

Should the government stop absorbing the cost of the risk of fires and impose the expected cost of that risk (the product of the probability of fire and the dollar amount of loss if there is a fire) on the parties, from the standpoint of efficiency it would not matter which party bore the risk.

Assuming an expected added cost of two units, if the law assigns this cost to home builders, in the long run the supply curve will shift two units upward to $S_2$. This shift reflects the fact that in effect the risk of fire taxes the home builder two units from the purchase price. The market will eventually arrive at a new equilibrium at point Y, the intersection of $D_1$ with $S_2$, with price equal to $P_2$ and number of houses purchased equal to $Q_2$. On the other hand, if the law assigns the added cost to home buyers, in the long run the demand curve will shift downward two units to $D_2$, reflecting the added cost to consumers of the new risk. The market will eventually arrive at a new equilibrium at point Z, the intersection of $S_1$ and $D_2$, with price per house equal to $P_3$ and rate of production again equal to $Q_2$. The difference between the $Q_2$ and $Q_1$ quantities of houses is a consequence of the government's fire insurance subsidy.

Regardless of whether the builder or the buyer bears the risk of loss from the fire, the number of houses bought and sold remains the same, $Q_2$. But when the law assigns the risk to home buyers, the market price is two units lower than it would be if the builders assumed

the burden. Nonetheless, such an assignment is not necessarily preferable because buyers at the lower price purchase a risk-laden house and must absorb the loss if a fire occurs. If a buyer wishes a risk-free house, he must purchase insurance, which will cost at least as much as the expected cost of the risk of fire. When this cost is added to the cost of the house, the total price is at least as high as it would be if the builder were assigned the risk, $P_2$. Thus, no matter which way the law assigns the risk of fire, the price and quantity of houses offered risk-free to the buyer will be the same.

Risk security is as much an economic good as anything else bought and sold. If an individual's conduct involves a one in one thousand chance of a $50,000 loss, the conduct has a $50 expected cost (equal to $0.001 \times 50,000$). Nevertheless, he may be willing to pay as much as $70 for risk security, in which case he increases his utility\textsuperscript{76} if he

\textsuperscript{76} See text accompanying note 2 supra.
can find an insurance company to assume the risk for $60 (at an expected cost to the company of $50).

Applying the foregoing analysis to the contract-to-repair cases indicates that if the courts had ruled forthrightly, as they did in the contract-to-build cases,\(^7\) that either the builder or the owner bore the risk of fire, then future parties would have been better off. If the courts had assigned the risk to building contractors, assuming momentarily that they are better able to insure, either by self-insuring or by buying a single insurance contract to cover all their repair jobs, then their bids would reflect the expected cost of the risk of fire. If the courts had assigned the cost of the risk of fire to owners, then, still assuming that contractors are better able to insure, contractors could gain a competitive advantage over their competitors by offering to assume the risk of fire at a cost lower than that at which the owner could purchase insurance on his own. In the long run contractors and owners would customarily allocate the risk of fire to the contractors during their negotiations, raising the prices of repair jobs, but at an increment less than the cost to the owners of procuring insurance elsewhere. No matter which way the law initially assigned risk security, the subsequent bargaining and exchange would bring the parties to the most efficient rate of construction because bargaining and exchange has the effect of producing an efficient distribution of resources.\(^8\)

Since the vague definition of contract interests which results when the courts apply the doctrine of impossibility means less wealth for future parties, one might naturally inquire where the wealth is lost. A typical first guess might be that the loss is in the form of litigation expenses. If this were the upshot of the analysis so far, it would be fair to ask why one should bother with this analysis. The loss of wealth, however, is more subtle than that. The reason that the parties are not immediately aware of the loss is that they lost it a century ago. Imagine the legislature passing a statute to the effect that the government would periodically flip a coin five times, and if the coin came up heads on each flip, a landowner would lose his land. The flip of the coin would not cost the landowner anything (that is, his litigation costs would be zero), but the landowner's property would suddenly drop in value because formerly well defined property interests would become vague property interests subject to forfeiture unexpectedly. Contract interests subject to unforeseeable forfeiture through the operation of the doctrine of impossibility are likewise made less valuable. The difference is that in the land ownership example landowners now enjoy well defined property interests and would notice the loss; in the con-

\(^7\) See cases cited note 19 supra.

\(^8\) Hayek, Socialist Calculation: The Competitive Solution, 7 ECONOMICA 125 (1940).
tract example the parties to the contract do not enjoy well defined con-
tract interests and do not realize that their contract interests would be
worth more if they were more precisely defined.79

The point to be drawn so far is that definite risk assignment is
more economically efficient than indefinite risk assignment. The gen-
eralization that a risk assignment to either party will produce an equally
efficient result assumes that the costs of bargaining and exchange are
relatively low. When those costs are relatively high, that generalization
is no longer accurate, as will be discussed below.80

The Analysis Extended to Other Cases: The Suez Cases

The building contract cases ably demonstrate what happens when
courts apply the doctrine of impossibility. The consequences of the
document extend beyond the building cases to contracts generally, as is
shown by reexamining the extensively discussed group of cases which
arose after war closed the Suez Canal in 1956,81 forcing ships to sail
around the Cape of Good Hope and provoking litigation lasting over
ten years. The cases involved two types of contracts: charter party
contracts,82 whereby a shipowner chartered his ship to another, and
contracts for sale, c.i.f. (cost, insurance, and freight),83 whereby a
foreign seller agreed to ship and insure goods, the contract price pre-
sumably reflecting these costs. These cases highlight the complexity
of the issues involved in the doctrine of impossibility. Arbitrators and
courts considered the question whether the doctrine of impossibility
applied to the Suez closing twenty different times before they finally
determined that the doctrine did not apply to either the contracts for
sale, c.i.f., or the charter party contracts.84 If the courts had ruled origi-

79. See text accompanying notes 1-2 supra.
80. See text accompanying notes 87-94 infra.
81. The legal rationales of the holdings are discussed at length by two commenta-
    tors. See Birmingham, supra note 41; Schlegel, supra note 41.
82. Transatlantic Financing Corp. v. United States, 363 F.2d 312 (D.C. Cir.
    1966); Glidden Co. v. Hellenic Lines, Ltd., 275 F.2d 253 (2d Cir. 1960); Ocean Tramp
    2 Q.B. 226 (C.A. 1963); Société Franco Tunisienne D'Armement v. Sidermar S.P.A.,
    1 Q.B. 131 (1958).
84. Of the English cases, the history of the charter party contract cases is as fol-
    lows: The first to come up was Franco Tunisienne D'Armement v. Sidermar S.P.A.,
    [1961] 2 Q.B. 278 (1960), in which a shipowner chartered his ship to the defendant,
    who tendered to the shipowner a load of iron ore a week after the closing. The ship-
    owner later claimed the reasonable value of the voyage from India to Italy via the Cape
finally\textsuperscript{85} that one party or the other would bear all the risks of increased costs due to war, then the parties in the Suez cases would not have been subject to the uncertainty which resulted from the closing of the canal.\textsuperscript{86}

of Good Hope, asserting that the closing frustrated the original contract. The arbitrator ruled in favor of the charterer, but the court discharged the shipowner and ruled that the original contract was frustrated. In 1963 the \textit{V/O Sovfracht} case reached the court of appeals; the court, through Lord Denning, M.R., reversed the trial court and ruled that the charter contract between the parties was not frustrated just because the charterer had to sail the ship to India via the Cape. Ocean Tramp Corp. v. V/O Sovfracht, [1964] 2 Q.B. 226 (C.A. 1963), rev’d [1963] 2 Lloyd’s List L.R. 155 (Q.B.). \textit{Sidermar} was overruled.

The history of the c.i.f. contract cases is even more involved. The first was Carapanayoti & Co. v. E.T. Green, Ltd., [1959] 1 Q.B. 131 (1958). The arbitration umpire and the board of appeal held that the seller of Sudanese semi-decorticated cottonseed cake was not excused because of the high cost of shipping around the Cape, but the trial court reversed, ruling that the contract was frustrated. In the same year and in the following one similar cases reached the courts. In the \textit{Tsakiroglou} case, decided in December of 1958, the court held that the closing did not frustrate a c.i.f. contract for the sale of Sudanese groundnuts. \textit{Tsakiroglou & Co. v. Nobleth Thorl, G.m.b.H.}, [1960] 2 Q.B. 318 (1958). In so doing the court affirmed the arbitration umpire and board of appeal, distinguishing \textit{Carapanayoti}. \textit{Id.} at 328. In June, 1959, the court decided another Sudanese groundnut c.i.f. contract case, \textit{Gaon}, and again affirmed arbitration and board of appeal decisions that frustration did not apply. Albert D. Gaon & Co. v. Société Interprofessionelle des Oleagineux Fluides Alimentaires, [1960] 2 Q.B. 334 (1959). The court in \textit{Gaon}, however, disapproved of \textit{Carapanayoti}. \textit{Id.} at 347. \textit{Tsakiroglou} and \textit{Gaon} were appealed together; on appeal, the judgments were affirmed and \textit{Carapanayoti} overruled. [1960] 2 Q.B. 348 (C.A.). \textit{Tsakiroglou} was appealed to the House of Lords, where the judgment was affirmed. [1962] A.C. 93 (1961).

\textsuperscript{85} E.g., Texas Co. v. Hogarth Shipping Co., 256 U.S. 619 (1921); Lloyd v. Murphy, 25 Cal. 2d 48, 153 P.2d 47 (1944).

\textsuperscript{86} Two of the c.i.f. cases (see note 83 supra) involved contracts for the sale of Sudanese groundnuts. If, before the contracts in question were agreed upon, the courts had assigned the risk of war to seller, then the overseas prices of groundnuts would have reflected the expected cost of the risk of war. If the court had assigned the risk to the European buyers, the retail price would have reflected the cost to the buyers of procuring war insurance. Even though the competing sellers would sell at a price not reflecting the cost of the war risk, retail prices charged in Europe would reflect that cost and would approximate the price which would have resulted if the risk had been assigned to overseas sellers. If the sellers could self-insure or procure outside insurance at a lower cost than could buyers, then sellers could gain a competitive advantage over other sellers by offering to assume the risk of war at a lower cost than the buyer would have to pay for insurance he obtained on his own. In the long run, sellers and buyers would customarily allocate the risk of war to sellers during their negotiations, raising the wholesale price, but at an increment less than the cost to the buyers of procuring insurance elsewhere. In either case, the retail price and the amount sold at retail would be approximately the same, as would the sellers’ and buyers’ profits.

The Sudanese seller’s profits would be affected by the cost of the war risk but unaffected by the way it was assigned. If it were assigned to the Sudanese seller, he would charge higher prices, but his costs would be commensurably higher; if it were assigned to the European buyer, the seller’s costs would be lower, but so would the market price of nuts. In either case his profits would be nearly the same.
The Problem of Transaction Costs

The fact that an assignment of the risk of loss either way produces an equally efficient result does not mean that a court in a case of first impression has no factors to consider when deciding to whom to assign the risk. The building and shipping contract examples involved situations where the transaction costs were low compared to the amounts involved in performance of the contracts. Examples of transaction costs include the cost of hiring attorneys to negotiate the contracts and the cost of acquiring information as to which builders, sellers, or insurers are willing to deal. When transaction costs are relatively high, the bargaining and exchange of risk security may not take place.

Suppose that the law assigns the war risk to foreign sellers and the corresponding risk security to buyers. If buyer A could procure war insurance for $100 and seller B could procure it for $200, then a more efficient distribution of risk security would result if B persuaded A to sell him the risk security for any amount less than $200. A, of course, would be unwilling to sell it for anything less than $100, and so they would arrive at a price between $100 and $200. Thus the process of bargaining and exchange produces an efficient distribution of the resource of risk security.

Bargaining and exchange, however, is not a cost-free process. For every exchange which improves the parties' positions, there is a corresponding transaction cost which comes out of someone's pocket. Typically, one or both of the parties bears the cost. If the cost to either party exceeds the gain he expects to realize from the exchange, that party will not consider making the exchange, as it would leave him worse off. Thus any policy of the law which reduces transaction costs also promotes efficiency and improves the welfare of society. One way to minimize transaction costs is for the law to assign the property right in question to the party who would have purchased it if the right had been assigned to the other party and if the transaction costs were zero. Applying this principle to the impossibility cases has this re-
Whenever a court faces a case in which either party invokes the doctrine of impossibility, the court should consider why the parties failed to allocate the risk themselves. If high transaction costs apparently make negotiation overly expensive with regard to the particular risk, then the court should consider whether either party would logically have purchased risk security from the other had the negotiation costs been sufficiently low to make the exchange mutually profitable.\(^9\)

If the court can determine that a particular party would have purchased risk security from the other under these conditions, then the court should assign risk security to that party,\(^9\) thereby maximizing efficiency and social welfare. In the example just posed, if high transaction costs prevented the foreign seller, \(B\), from buying risk security from \(A\), the buyer, then a court deciding a case between \(A\) and \(B\), where war disrupted their contract, could maximize the efficiency of future transactions by assigning security from the risk of war once and for all to sellers such as \(B\), since they would purchase risk security from buyers if the law initially assigned risk security to buyers and if transaction costs were zero.

It is one thing to say that the court should assign risk security to the party who would have acquired it had transaction costs been zero and another thing to tell the court how to determine who would have acquired risk security under these circumstances. In the previous example, the crucial factor was that \(A\) could procure war insurance cheaper than \(B\) could. Determining who may better insure in turn depends on several factors: Who has control of the risk? Who has the special knowledge required to assess the risk? Who is in a position to self-insure? Who is in a position to procure insurance at a lower cost? In complex exchanges there may be a multitude of factors to consider, but a court aware of the nature of the problem is more likely to arrive at the optimum assignment of risk security than one which assigns risk security inconsistently or fails to assign it clearly, as happens when a court allows a plea of impossibility.

An Alternative to Judicial Assignment—Should the Legislature Decide?

In view of the complexity of the issues involved in determining which assignment of risk security will minimize transaction costs, one might argue that the legislatures are better equipped to make the determination than are the courts.\(^9\) Richard Posner, a prominent writer in

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93. See id.
94. See id.
95. Besides the question of competency to decide, there is the additional issue posed by the fact that the authority of a judicial risk assignment rests upon the authority of stare decisis. To the extent that earlier cases can be distinguished, a judicial assign-
the field of law and economics, suggests that judges tend to make economically wiser decisions than do legislators, who presumably are subject to the malign influences of backers and lobbyists. Since one can imagine malign influences on judges as well, the proposition is debatable. A comparison of the judicial solution to the impossibility cases with the legislative experience with the same problems shows that legislatures have made wiser risk assignments than have the judges who retain the doctrine of impossibility as part of the common law.

The first legislative attempt to assign the risk of loss in sales contracts was not successful. Section 22 of the Uniform Sales Act provided that the party who had the "property" in the item also had the risk of its loss. Though this section had the blessing of simplicity, it also created the inefficiency of uncertainty. Contracting parties frequently dealt with each other without considering when either party had the property in the thing sold, with the result that if the contract was silent on the matter, the court's allocation of the losses depended on the difficult task of discovering the parties' intentions when the parties in fact had expressed no intentions.

The difficulty was eliminated in section 2-509 of the Uniform Commercial Code (Risk of Loss in the Absence of Breach), which provides explicit, though detailed, assignments of the risk of loss. When the contract requires the seller to ship the goods, the risk of loss passes to the buyer when the goods are tendered to the carrier unless the contract requires the seller to deliver them to a particular destination. In the latter case the risk passes when the goods are so tendered as to enable the buyer to take possession. When shipment is not required, the risk of loss passes to the buyer when he receives the goods.

Section 2-509 meets all the requirements of an economically sound assignment of risks by the law. First, the risk of loss is assigned clearly: the parties' contract interests are well defined. Second, the section attempts to minimize transaction costs by assigning the risk to the party who is better able and more likely to insure: comment 3 states that the theory of section 2-509 is that a merchant who is to deliver the goods at his own plant "continues meanwhile to control the goods and can be expected to insure his interest in them." Third, the section may not be as secure as a legislative assignment. The counter argument, of course, is that legislative assignments are insecure to the extent that they may be repealed.

96. Posner, supra note 59, at 328.
97. See also Buchanan, Good Economics—Bad Law, 60 Va. L. Rev. 483 (1974).
98. E.g., Radloff v. Bragmus, 214 Minn. 130, 7 N.W.2d 491 (1943).
100. See id. § 2-509(3). This section applies only to merchants. See text accompanying note 103 infra.
101. Id. § 2-509, comment 3 (emphasis added).
tion allows the parties to reassign the risk, which allows readjustment in those cases in which the code happens to assign the risk to the party less able to insure.\textsuperscript{102} The drafters, however, appear to have attempted to minimize the need for readjustment. For instance, when the seller is not a merchant, the code provides a special exception, transferring the risk from the seller to the buyer when the seller tenders delivery, rather than when the buyer receives the goods.\textsuperscript{103}

The legislative experience with risk assignment has not been as successful as section 2-509 might otherwise indicate. With respect to risks other than the risk of loss,\textsuperscript{104} the Uniform Commercial Code unfortunately returns to the traditional approach, enacting a doctrine of commercial impracticability in section 2-615. Although the name change from impossibility to commercial impracticability more accurately describes the doctrine of impossibility,\textsuperscript{105} section 2-615 still produces the inefficiencies inherent in the common law doctrine of impossibility.

Conclusion

In situations in which traditional legal analysis has not produced satisfactory results, practitioners have a powerful tool, in the form of economic concepts and theories, with which to provide courts with new insights into old problems. Approaching the impossibility cases from both the legal and the economic points of view shows the futility in trying to find solutions by examining the short run effects of different loss allocation schemes. Examining the long-run effects of the doctrine of impossibility shows that it produces vaguely defined contract interests. An economic analysis of the long-run effects of these schemes shows that if the courts or the legislatures assign the risks of contract disruption to one party or the other, the welfare of society will be greater than if the law continues to leave contract interests subject to the doctrine of impossibility. When transaction costs are zero, it does not matter to whom the law assigns the risk and the corresponding risk security, as long as the law assigns the risk to someone.

In order to avoid transaction costs, which produce inefficiencies, the courts or legislatures should attempt to allocate the risk in the manner the parties would eventually have allocated it had transaction costs

\begin{itemize}
\item \textsuperscript{102} Id. § 2-509(4).
\item \textsuperscript{103} Id. § 2-509(3).
\item \textsuperscript{104} For instance, in these uncertain times the courts may anticipate a plea of "commercial impracticability" on the grounds that inflation made a long-term contract extremely burdensome.
\item \textsuperscript{105} See text accompanying note 24 supra.
\end{itemize}
not hindered a potential exchange. In a competitive market the parties would have allocated the risk to the party able to insure against it at a lower cost.

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