Chapter 7

TOPICS IN
THE ECONOMICS
OF CONTRACT LAW

In the preceding chapter, we explained that a theory of contracts must answer two questions: "What promises should be enforced?" and "What should be the remedy for breaking an enforceable promise?" We summarized the economic theory developed to answer these questions. Cooperation is productive. People often make promises to cooperate. Enforcing promises enables people to make their commitments credible. Courts should enforce promises when the parties want enforceability in order to make a credible commitment to cooperate. Enforcement ideally induces optimal performance and reliance at low transaction costs. Optimal performance and reliance maximize the expected value of cooperation to both parties.

This economic theory allowed us to develop a framework for analyzing contracts in the preceding chapter. In this chapter we add texture and detail to the economic framework. In the first part of this chapter we focus on remedies for breach of contract. The best remedy for breach secures optimal commitment to the contract, which causes efficient formation, performance, and reliance.

Explicit terms in a contract require interpretation, gaps require filling, and inefficient or unfair terms require regulation. We developed a general theory in the preceding chapter for optimal interpretation, gap-filling, and regulation of contracts. According to this theory, legal doctrines should perfect contracts by minimizing transaction costs and correcting market failures. We analyze the relevant legal doctrines in detail in the second part of this chapter.

I. REMEDIES AS INCENTIVES

When a party to a contract fails to perform as promised, the victim may ask the court for a remedy. Remedies fall into three general types: party-designed remedies, court-imposed damages, and specific performance. First, the contract may stipulate a remedy. The contract stipulates a remedy when it contains explicit terms prescribing what to do if someone breaches. For example, a construction
contract may stipulate that the builder will pay $200 per day for late completion of a building. Instead of stipulating a specific remedy, the contract may stipulate a remedial process. For example, the contract may specify that disputes between the parties will be arbitrated by the International Chamber of Commerce, which has its own rules about remedies.

Because negotiating and drafting are costly, an efficient contract will not explicitly cover every contingency. In fact, most contracts do not specify remedies for breach. When the contract omits a remedy, the court must supply one. Second the courts may supply a remedy in the form of damages. And third, the courts may order the breaching party to specifically perform the contractual promise.

Damages and specific performance are the two general types of court-designed remedies for breach of contract. Different legal systems in different countries disagree about the preferred remedy. In common law countries and in France, courts say that damages are the preferred remedy, whereas German courts say that specific performance is the preferred remedy. The difference between alternative legal traditions, however, is greater in theory than in practice. In practice, each legal system prescribes damages as the remedy in some circumstances and specific performance as the remedy in other circumstances. Furthermore, the prescriptions largely overlap in many different legal systems. Presumably, the prescriptions overlap because different systems of law respond to the same economic logic. Common law and civil law traditions both tend to specify the efficient remedy for breach of contract.

THE UNIFORM COMMERCIAL CODE, RESTATEMENTS OF CONTRACTS, AND STATUTE OF FRAUDS

In the civil law countries, which include the nations of continental Europe, committees of scholars have formulated contract law into codes that legislatures enacted. In common law countries, which include the United States, judges have formulated contract law in deciding cases. This contrast, however, can be overstated. Americans have actually codified much of the common law of contracts in three important documents: the Uniform Commercial Code, the American Law Institute's Restatements of Contracts, and statutes revising the old English Statute of Frauds.

The National Conference of Commissioners on Uniform State Laws was founded in the 1890s to unify common law in the American states. The Conference and the American Law Institute (described below) adopted the Uniform Commercial Code in 1952 and extensively revised it in 1956. Forty-nine states (all but Louisiana, which has a civil law tradition) have adopted the Uniform Commercial Code. It consists of nine articles covering all aspects of commercial transactions. For example, Article 1 sets out the general provisions of the code; Article 2 covers the sale of goods (services are not covered), and Article 9 covers secured transactions.
A. Alternative Remedies

Different remedies create different incentives for the parties to a contract. We will develop models to compare the incentive effects of different remedies on investment in performance and reliance. First, however, we must examine alternative remedies in greater detail.

1. Expectation Damages

Damages for breach of contract compensate the promisee for the injury caused by the non-performing promisor. In a contract setting, the term “injury” has several different meanings. First, the promisee is worse off than if the contract had been performed. Performance provides a baseline for computing the injury. Using this baseline, the courts award damages that place the victim of breach in the position he or she would have been in if the other party had performed.

The promisee expects to gain from performance. Consequently, the common law tradition refers to damages based on the value of expected performance as “expectation damages.” The civil law tradition refers to these damages as “positive damages” (lucrum cessans) because the damages replace income that would have accrued in the future. If expectation damages or positive damages achieve their purpose, the potential victim of breach is equally well off whether there is performance, on the one hand, or breach and payment of damages, on the other hand. We say that perfect expectation damages leave potential victims indifferent between performance and breach.

We will illustrate expectation damages by three examples:

Example 1—Seller’s Breach: O Ticket Agency offers opera tickets at the price $p_0$. K Ticket Agency offers equivalent opera tickets at the

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The distinction between expectation and reliance damages, which is old in European jurisprudence, is neither as old nor as clear-cut in Anglo-American jurisprudence.
lower price \( p_k \). Consumer orders \( x_k \) tickets from K at the contract price \( p_k \) and promises to pay when he picks up the tickets on the day of the performance. Close to the day of the performance, K announces that it will breach and not deliver the tickets to Consumer. In the meantime, the show has succeeded and the price of tickets has risen, so Consumer pays the higher price, \( p_S \), for substitute tickets purchased from a third ticket agency.

Replacing the promised performance with a perfect substitute puts the consumer in the same position that he would have been in if the promisor had performed. In this example, “substitute performance” consists in buying tickets at the price \( p_S \). Accordingly, perfect expectation damages equal \( x_k (p_S - p_k) \). We will restate this formula in the language of contract law. The contract was made for future delivery of a good (“futures market”). After breach, the consumer bought substitute goods for delivery on the spot (“spot market”). The price had risen, so the spot price exceeded the contract price. To put the consumer in the same position as if the seller had delivered the goods, the seller must pay compensation equal to the difference between the contract price \( p_S \) and the spot price \( p_k \).

Now we turn from seller’s breach to buyer’s breach.

**Example 2—Buyer’s Breach:** K Ticket Agency offers opera tickets for sale at the price \( p_k \). Consumer orders \( x_k \) tickets and promises to pay when he picks up the tickets on the day of the performance. In reliance on Consumer’s promise, K purchases \( x_k \) tickets at the wholesale price \( p_W \). If Consumer had not ordered the tickets, K could have contracted to sell them to an agency named O at the lower price \( p_O \). Close to the date of the performance, Consumer announces that he will not pick up or pay for the tickets. In the meantime, the show has flopped and the price of tickets has fallen, so K resells the tickets at the lower price, \( p_S \), to another consumer.

To put K in the same position as if Consumer had performed in Example 2, damages must equal \( x_k(p_k - p_S) \). In other words, perfect expectation damages for buyer’s breach equal the difference between the contract price \( p_k \) and the spot price \( p_S \).

In Examples 1 and 2, many seats in the opera are close substitutes for each other. Our third example involves breach with an imperfect substitute.

**Example 3—Buyer’s Breach with Unique Good:** Seller builds custom boats and Buyer retails boats to consumers. Seller offers to build Buyer a custom boat with any one of three compass systems for navigation which are named K, O, and A. Buyer estimates correctly that the market value at which he can retail the boat, depending on which compass is installed, will be \( v_K \), \( v_O \), or \( v_A \), respectively. These values are net of the cost of the compass. Since \( v_K > v_O > v_A \), Buyer maximizes profits by ordering the boat built with the K compass. However, Seller actually delivers a boat with

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2This specific formula for damages is called the “substitute-price formula.” The substitute-price formula awards the victim of breach the cost of replacing a promised performance with a substitute performance. If a commodity is homogeneous, the substitute performance may be identical to the promised performance. In that case, the substitute-price formula awards perfect expectation damages. However, if the commodity is differentiated rather than homogeneous, the substitution is imperfect.
an A compass. Replacing the compass after installation is prohibitively expensive, so Buyer subsequently retails the boat for $v_A$.

To put Buyer in the same position as if Seller had performed in Example 2, damages must equal $v_K - v_A$. In other words, perfect expectation damages for Seller’s breach equal the difference between the value of a performed contract and the actual value of what was delivered.

The following table summarizes these facts about expectation damages from our three examples. We will explain the entries for “reliance damages” and “opportunity cost” shortly:

<table>
<thead>
<tr>
<th>EXAMPLE 1: SELLER’S BREACH WITH SUBSTITUTE</th>
<th>EXAMPLE 2: BUYER’S BREACH</th>
<th>EXAMPLE 3: SELLER’S BREACH WITH NO SUBSTITUTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expectation damages</td>
<td>$x_k(p_S - p_o)$</td>
<td>$x_k(p_k - p_o)$</td>
</tr>
<tr>
<td>Reliance damages</td>
<td>0</td>
<td>$x_k(p_w - p_o)$</td>
</tr>
<tr>
<td>Opportunity cost</td>
<td>$x_k(p_S - p_o)$</td>
<td>$x_k(p_o - p_o)$</td>
</tr>
</tbody>
</table>

2. Reliance Damages  
Now we consider the second meaning of “injury” in a contract setting. The promisee may invest in reliance on the promise. Breach usually diminishes or destroys the value of the investment in reliance. So reliance increases the loss resulting from breach. Breach makes promisees who rely worse off than if they had not made contracts. “No contract” provides a baseline for computing the injury. Using this baseline, the courts may award damages that place victims of breach in the position that they would have been in if they had never contracted with another party.

Damages computed relative to this baseline are called “reliance damages” in the common law tradition. The civil law tradition refers to these damages as “negative damages” because the damages replace income that was actually lost. If reliance damages or negative damages achieve their purpose, the potential victim of breach is equally well off whether there is no contract, on the one hand, or breach of contract and payment of damages, on the other hand. We say that perfect reliance damages leave potential victims indifferent between no contract and breach.4

To illustrate by Example 1, after K breached, Consumer had no opera tickets and faced a spot price of $p_S$ to buy them. This is the same position that Consumer would have been in if Consumer had not contracted to buy opera tickets from anyone. Consequently, Consumer did not change his position in reliance on the contract and reliance damages in Example 1 are zero. (Can you think of a reliance investment that Consumer might reasonably have made?)

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3This is called the “diminished-value formula.” When performance of a contract is partial or imperfect, the diminished-value formula awards the victim of breach the difference between (1) the post-breach value of a commodity that was to be received or improved under the contract, and (2) the value the commodity would have had if the contract had been properly performed.

4Recall our discussion in the previous chapter of the subtle relationship between money damages and optimal reliance.
To illustrate by Example 2, in reliance on Consumer’s promise, K bought $x_k$ opera tickets at the wholesale price $p_W$. After Consumer breached, K sold the tickets at the spot price $p_S$. Assuming the wholesale price exceeds the spot price, reliance on the contract caused K to lose $x_k(p_W - p_S),$\textsuperscript{5} which equals perfect reliance damages.

Turning to Example 3, Buyer did not change his position in reliance on Seller’s delivering the boat with a K compass rather another kind of compass. Since the contract did not cause Buyer to change his position, reliance damages are zero.

The row labeled “Reliance Damages” in the preceding figure summarizes these facts.

3. Opportunity Cost

Now we consider the third meaning of “injury” in a contract setting. Making a contract often entails the loss of an opportunity to make an alternative contract. The lost opportunity provides a baseline for computing the injury. Using this baseline, the courts award damages that place victims of breach in the position that they would have been in if they had signed the contract that was the best alternative to the one that was breached. In other words, damages replace the value of the lost opportunity.

Damages computed relative to this baseline are called “opportunity-cost” damages. If opportunity-cost damages achieve their purpose, the potential victim of breach is equally well off whether there is breach of contract, on the one hand, or the best alternative contract, on the other hand. We say that perfect opportunity-cost damages leave potential victims indifferent between breach and performance of the best alternative contract.

Previously we discussed the fact that the promisee may invest in reliance on a contract. Similarly, the promisee may forego an opportunity in reliance on a promise. Consequently, the common law tradition considers opportunity-cost damages to be a form of reliance damages. This form of reliance damages takes into account the opportunity lost from relying on a promise, not merely the promisee’s investment in reliance. Similarly, the civil law tradition considers opportunity-cost damages a form of negative damages (\textit{damnum emergens}).

To illustrate opportunity-cost damages by Example 1, if Consumer had not contracted to buy opera tickets from K at price $p_k$, then Consumer would have purchased the tickets from O at price $p_O$. By relying on K’s promise, Consumer lost the opportunity to buy from O and instead had to pay the spot price $p_S$. Consequently, the difference between these prices measures the lost opportunity: $x_k(p_S - p_O)$. In other words, perfect opportunity-cost damages for seller’s breach equal the difference between the best alternative contract price and the spot price.

To illustrate by Example 2, in reliance on Consumer’s promise, Agency K bought $x_k$ opera tickets at the wholesale price $p_W$ and lost the opportunity to sell them to Agency O at price $p_O$. After Consumer breached, K sold the tickets at the

\textsuperscript{5}This specific formula is called the “out-of-pocket-cost” formula. The out-of-pocket-cost formula awards the victim of breach the difference between (1) the costs incurred in reliance on the contract prior to breach, and (2) the value produced by those costs that can be realized after breach.
spot price $p_S$. Assuming the wholesale price exceeds the spot price, perfect compensation for K’s lost opportunity equals $x_k(p_O - p_S)$. In other words, perfect opportunity-cost damages for buyer’s breach equal the difference between the best alternative contract price and the spot price.

Turning to Example 3, contracting for a K compass caused Buyer to lose the opportunity to purchase the boat with an O compass. The difference between the boat’s retail market value with an O compass and its retail value with the actual compass equals perfect opportunity-cost damages: $v_O - v_A$.

The row labeled “Opportunity Damages” in the preceding figure summarizes these facts.

4. **Problem of Subjective Value:** *Hawkins v. McGee*. In the preceding examples of expectation, reliance, and opportunity-cost damages, the victim of breach values performance according to market prices. Now we turn to a famous case in which the victim of breach valued performances differently from the market. The famous case of *Hawkins v. McGee*, 84 N.H. 114, 146 A. 641 (N.H., 1929), dramatically illustrates the distinction between the three forms of damages when subjective value does not equal market value. The plaintiff, George Hawkins, suffered a childhood accident that left a permanent scar on his hand. When Hawkins was 18 years old, his family physician, McGee, persuaded him to submit to an operation that the doctor asserted would restore the hand to perfection. In the operation, skin from the plaintiff’s chest was grafted onto his hand. The result was hideous. The formerly small scar was enlarged, covered with hair, and irreversibly worse. (Generations of American law students know *Hawkins v. McGee* as “the case of the hairy hand.”) Hawkins prevailed against McGee in a suit alleging that the doctor had broken his contractual promise to make the hand perfect.

The question on appeal was, “What damages should be awarded to Hawkins?” This issue is illustrated in Figure 7.1. The horizontal axis in this figure indicates the range of possible conditions of the hand, which vary from perfection to total disability. The vertical axis indicates the dollar amount of damages. The curved lines on the graph indicate the relationship between the extent of the disability and the amount of money needed to compensate for it.

Courts compute compensatory damages for physical injuries every day. Juries typically make the computation in America, whereas judges typically make the computation in Europe. Doubt remains as to exactly how courts make, or should make, the computation. The idea that money compensates for a serious physical injury perplexes some people. Please set aside your perplexity for the moment and consider an economic theory of compensation.

Assume that welfare or utility remains unchanged while moving along any curve in Figure 7.1. Welfare or utility remains unchanged because a change in compensation exactly offsets a change in the patient’s condition when moving

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6In general, if breach causes the injured party to purchase a substitute performance, the opportunity-cost formula equals the difference between the best alternative contract price available at the time of contracting and the price of the substitute performance obtained after the breach.
from one point to another on the same curve. Therefore, the curves are analogous to indifference curves in the microeconomic theory of consumer choice.

Now we can use Figure 7.1 to contrast damages based on expectation, reliance and opportunity cost. First, consider expectation damages in *Hawkins v. McGee* as represented by the curved line labeled “expectation.” The physician promised to make the boy’s hand perfect. If the physician had performed, Hawkins would have a 100% perfect hand and no compensation. Assume that after the operation the patient’s hand was 25% perfect. Expectation damages are the amount of money needed to compensate for the shortfall between the 100% perfect hand that was promised and the 25% perfect hand that was achieved. To measure these damages, locate the 25% point on the horizontal axis, move vertically up to the curve labeled “expectation,” and then move horizontally over to the vertical axis to determine the corresponding dollar amount of damages—$10,000. By assumption, the patient is as well off with $10,000 in damages and a 25% perfect hand as with no damages and a 100% perfect hand.

Now consider reliance damages, which are graphed by the curve labeled “reliance.” Under the reliance conception, the uninjured state is the condition in which the patient would have been if he had not made the contract with the breaching party. Assume that if there had never been a contract, the patient would have had a 50% perfect hand, whereas after the operation the hand was 25% perfect. Reliance damages are the amount of money needed to compensate the
deterioration of the hand from 50% to 25%. Like the expectation curve, the reliance curve represents the relationship between the extent of the disability and the amount of money needed to compensate for it. The only difference is that the reliance curve touches the horizontal axis at the point where the hand is 50% perfect, rather than 100% perfect. By following the same steps as in expectation damages, we find that the patient is equally well off with $5,000 in damages and a 25% perfect hand as with no damages and a 50% perfect hand. Thus, reliance damages equal $5,000.7

Finally, consider the opportunity-cost measure of damages. Perhaps the operation performed by Dr. McGee caused Hawkins to lose the opportunity of having another doctor perform the operation successfully. If such an opportunity were lost, its value provides another baseline for computing damages. The value of the foregone opportunity depends on how close to perfection the hand would have been after an operation by another doctor. To illustrate, suppose that another doctor would have restored the hand to the 75% level. The injury from relying on Dr. McGee equals the difference between the 75% level that the other doctor would have provided and the 25% level achieved by Dr. McGee.

To measure opportunity-cost damages, consider the “opportunity-cost” curve in Figure 7.1. The opportunity-cost curve touches the horizontal axis at the 75% point, corresponding to the (speculated) condition of the hand after an operation by the best alternative doctor. As with the other two curves, the opportunity-cost curve is constructed so that every point on it represents the same level of welfare. Consequently, a change in the hand’s condition represented by a move along the new curve is exactly offset by the corresponding change in damages. The value of the lost opportunity is read off the graph by moving vertically from the 25% point on the horizontal axis up to the “opportunity curve,” and then horizontally to the intersection with the vertical axis. Following these steps, the opportunity-cost measure of damages equals $8,000, which is less than expectation damages ($10,000) and more than reliance damages stripped of the opportunity cost ($5,000).

Figure 7.1 shows that expectation, reliance, and opportunity cost damages differ according to the baseline for measuring the injury, where “baseline” refers to the uninjured state. For measuring expectation damages, the uninjured state is the promisee’s position if the actual contract had been performed.8 For measuring reliance damages, the uninjured state is the promisee’s position if no contract had been made. For measuring opportunity-cost damages, the uninjured state is the promisee’s position if the best alternative contract had been performed.

In general, perfect compensation means a sum of money sufficient to make the victim of an injury equally well off with the money and with the injury as he or she would have been without the money and without the injury. The curves in Figure 7.1

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7In fact, Hawkins received $3000 from the original jury; subsequently, after the appellate court ordered a new trial, the plaintiff settled for $1400 plus lawyer’s fees.

8This proposition implicitly assumes that the rate of breach is low. When the rate of breach is high, it can be anticipated to some extent, and so the promisee can plan for breach, just as airlines and hotels plan for “no-shows.” The phenomenon of statistically predictable breach creates a special set of problems for expectation damages.
depict perfect expectation, opportunity-cost, and reliance damages. When this book speaks about damage measures such as “expectation damages” or “reliance damages,” we mean an idealized measure of damages that we call “perfect.”

Performance of the actual contract would make the promisee at least as well off as performance of the next best alternative. Consequently, perfect expectation damages are at least as high as perfect opportunity-cost damages. Performance of the next best alternative would make the promisee at least as well off as no contract. Consequently, perfect opportunity-cost damages are at least as high as perfect reliance damages. The following inequalities typically hold when courts measure damages perfectly:

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\text{expectation damages} \geq \text{opportunity-cost damages} \geq \text{reliance damages.}
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We will explain why these three measures of damages usually have this rank by size. The promisee ordinarily chooses the best available contract; his loss from breach of the contract that he actually made is usually greater than his gain would have been from making the best alternative contract. Consequently, expectation damages typically exceed opportunity-cost damages.

Furthermore, the promisee expects to gain from making a contract rather than making no contract; so, expectation damages usually exceed reliance damages. (See if you can explain why it is the case that opportunity-cost damages are, therefore, usually greater than reliance damages.)

Sometimes, however, the three damage measures do not have their standard order. One reason for this is that courts award imperfect damages, and sometimes the imperfection is so large that, say, imperfect reliance damages exceed imperfect expectation damages. To illustrate, assume that the promisor contracts to deliver a glass diamond that belonged to the promisee’s grandmother. In reliance on the contract, the promisee, for sentimental reasons, commissions an expensive ring to hold the glass diamond. The fact that sentiment motivated the promisee’s commissioning of the ring means that the market value of the ring, with or without the glass diamond, is less than its cost. Suppose that the promisor fails to deliver the glass diamond, and the promisee sues. Perfect expectation damages equals the promisee’s subjective value of the ring with the jewel. However, the court refuses to compensate the promisee for loss of subjective value. Instead, the court asserts that “expectation damages” equal the market value of the ring with the jewel in it. As explained, the market value of the ring is less than its cost. In this case, perfect reliance damages equal the cost of the ring. So, reliance damages exceed what the court calls “expectation damages.”

We have explained that imperfections in damages awarded by courts can cause departures from the ordering of perfect damages. In addition, perfection damages can depart from their usual order because the promisee makes a mistake.

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9Note that the curves in Figure 7.1 illustrate the logic of compensation, not the actual computation of damages in this case.

10These two damage measures approach equality as markets approach perfect competition. The reason is that every contract has a perfect substitute in perfectly competitive markets, so the actual contract is identical to alternative contracts that were not made.
when contracting. In these circumstances, the actual contract may make the promisee worse off than no contract or an alternative contract. To illustrate, assume that a speculator who expects the market price of a good to rise signs a contract to pay now for its future delivery. If he is mistaken and the price falls, then he might be better off from having no contract rather than having this contract. In that case, his reliance damages will be higher than his expectation damages. In fact, this seldom happens because the promisor almost never breaches such a contract.11

We have distinguished three damages measures and illustrated their calculation. Question 7.1 provides a good test of your ability to distinguish and calculate these damages. To attack this problem, we suggest that you first compute the expected profit from the contract. (You should get $900.) Then calculate the actual loss. (You should get $11,100.) Finally, calculate the profit from the best alternative contract. (You should get $400). You should immediately see the expectation, reliance, and opportunity-cost damages.

**Question 7.1:** Buyer B pays $10,000 to New Orleans grain dealer D in exchange for D’s promise to deliver grain to buyer B’s London office on October 1. As a result of signing this contract, B decides not to sign a similar contract with another dealer for $10,500. D contracts with shipping company S to transport the grain. Buyer B agrees to resell the grain on arrival in London for $11,000 to another party. B pays $100 in advance (nonrefundable) as docking and unloading fees for the ship’s projected arrival in London.

The ship begins taking water several days out of New Orleans and returns to port. Inspection reveals that the grain is badly damaged by salt water, and D sells it as cattle fodder for $500. D conveys the news to B in London, who then purchases the same quantity of grain for delivery on October 1 at a price of $12,000.

a. How would you measure expectation damages for D’s breach of contract with B?
b. How would you measure reliance damages?
c. How would you measure opportunity-cost damages?

11To illustrate concretely, assume that A, who produces oil, promises to deliver x barrels to B next month. In exchange, B promises to pay A the contract price \( p_c \) per barrel on delivery. B is a speculator who buys for resale and does not change his position in reliance on the contract. At the end of the month, a fire in A’s refinery prevents him from delivering his oil, so A must breach or buy oil at the spot price \( p_S \) to deliver to B.

Consider two possible situations. First, assume that the contract prices \( p_c \) exceeds the spot price \( p_S \). As a result, B expects to gain \( (p_c - p_S)x \) from A’s performance. If A breaches, the expectation damages equal \( (p_c - p_S)x \) and the reliance damages equal zero. This is the usual ordering of damage measures.

Second, assume that the spot price \( p_S \) exceeds the contract price \( p_c \). As a result, B expects to lose \( (p_c - p_S)x \) from A’s performance. If A breaches, the expectation damages are negative and reliance damages are zero. This is not the usual ordering of damage measures. In the second case, however, A will not breach. Instead of breaching, A will purchase oil at the price \( p_S \) and delivering it to B, thus performing on the contract and earning a profit of \( (p_c - p_S)x \).
QUESTION 7.2: The actual choice of a damage measure often depends on practical problems, not theory. Give some examples of breached contracts in which opportunity-cost damages are easier to implement than expectation damages. Give some examples of breached contracts in which reliance damages are easier to implement than opportunity-cost damages.

QUESTION 7.3: Perfectly competitive markets contain many buyers and sellers of the same contract, so the best alternative contract is identical to the actual contract signed. What does this fact imply about the relationship between perfect expectation damages and perfect opportunity-cost damages for breach in perfectly competitive contract markets?

QUESTION 7.4: Airlines routinely sell more tickets for flights than the seats on the plane. “Overbooking” seldom causes problems because a statistically predictable number of ticket-holders fail to show up for flights. In contrast, each retailer of hearing aids typically has the capacity to sell many more hearing aids per week than it actually sells. “Excess capacity” is routine for retailers of hearing aids. Contrast the effects of overbooking and excess capacity on profits lost by the seller when the buyer breaches a contract to buy.12

QUESTION 7.5: Here is a timeline for breach of contract that leads to litigation.

On Jan. 1, A contracts to deliver a widget to B on June 1 at a price of $2 to be paid on delivery.

On April 1, A renounces the contract. At that time, B can buy a widget for immediate delivery for $3, or B can contract with C to deliver a widget on June 1 at a price of $3.25. B does not buy a widget for immediate delivery or contract for future delivery.

On June 1 B’s suit against A succeeds. The court finds that A breached the contract on April 1. The court wants to give B perfect expectation damages. On June 1, B can buy a widget for $4.

Question: Should the court give damages of $1.25, $2, $3, $3.25, $4, or $5?

Question: Should the award depend on whether B bought a widget on April 1, or signed a contract with C on April 1, or bought a widget on June 1?

5. Restitution In a deferred exchange, one party often gives something in exchange for the other party’s promise to do something later. In these circumstances, a remedy for breach is to require the breaching party to return what was given. For example, the buyer of a car often makes a “down payment” before receiving the car. If the seller breaches the contract to deliver the car, the court may order the

12This question concerns what is called the “lost-volume” problem.
seller to return the down payment. This remedy is called “restitution,” because it requires the injurer to give back what he or she took from the victim.\textsuperscript{13} Restitution is a minimal remedy. It does not compensate the victim of breach for expectation, opportunity, or reliance. Each of these three measures are typically larger than restitution damages. Although minimal, restitution often has the advantages of simplicity and enforceability.

6. Disgorgement

Perfect compensation is a sum of money that substitutes for the injury and leaves the victim indifferent about its occurrence. The victim who receives perfect compensation has no basis to complain about the injury. Consequently, the law often does not punish people who compensate perfectly for the injuries that they cause.

We can restate this argument in economic terms. Perfect compensation completely internalizes the external costs of an injury. When costs are completely internalized, efficiency requires freedom of action, not deterrence. Given cost internalization and freedom, a rational person injures others whenever the benefit is large enough to pay perfect compensation and have some left over, as required for efficiency.

Perfect compensation is impossible in principle for some kinds of injuries. For example, vague promises create uncertainty about the value of performance. When the value of performance is uncertain, perfect compensation is impossible. Compensation for breaking vague promises is inevitably imperfect.

Vague promises are often made in long-run relationships. Although vague, the promises can be important to sustaining the relationship. Consequently, the parties may want vague promises to be enforceable, but they may want a different remedy than compensatory damages.

To illustrate, consider the relationship between stockholders and directors of a corporation. Instead of promising the stockholders a definite rate of return on their investment, directors make vague promises to be loyal and do their best. Even if directors make no such promises, the common law tradition requires directors to be loyal to stockholders and to do their best.\textsuperscript{14} Sometimes, however, directors behave disloyally and stockholders sue. To illustrate, assume that a corporate director learns about valuable minerals on the company’s land. Before anyone else finds out, the director induces the company to sell her the land. The director violates her duty of loyalty by taking valuable minerals for herself that belong to the corporation.


\textsuperscript{14}The common law tradition holds directors to a “duty of loyalty” by virtue of the fiduciary relationship. Furthermore, the common law tradition applies the “business-judgment rule” to their decisions. The business-judgment rule holds directors responsible for making their best efforts to gather information and deliberate on decisions affecting the company, but excuses directors whose best efforts result in bad outcomes from liability to shareholders for any losses.
The relationship between directors and stockholders involves trust. Trust would be undermined by allowing a director to take assets that belong to the corporation. The law deters disloyalty by various means, including requiring the injurer to give the profits of wrongdoing to the victim. “Disgorgement damages” are damages paid to the victim to eliminate the injurer’s profit from wrongdoing. To illustrate, assume that the director who purchased the corporation's mineral-bearing land resold it to a third party at a high price. The director might be required to “disgorge” her profits from the sale by giving them to her corporation.

When disgorgement is perfect, the injurer is indifferent between doing right, on one hand, or doing wrong and paying disgorgement damages, on the other hand. Thus, perfect disgorgement is identical to perfect compensation, with the roles of injurer and victim reversed. The injurer achieves no gain from the wrongdoing net of perfect disgorgement damages, just as the victim suffers no harm from the injury net of perfectly compensatory damages.

**WEB NOTE 7.1**

For more on cases illustrating the difficulties of computing damages and further discussion, see our website.

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7. **Specific Performance**

Instead of damages, the court may order the breaching party to perform a specific act as a remedy. “Specific performance” usually requires the promisor to do what he or she promised in the contract. As mentioned, specific performance is the traditional remedy for breach of contract in some civil law countries, and damages are the traditional remedy in common law countries, but in practice, most legal systems use similar remedies in similar circumstances.

The typical case in which courts adopt specific performance as the remedy involves the sale of goods for which no close substitute exists. Examples include land, houses, antiques, works of art, and specialized labor contracts. In contrast, when breach involves the sale of goods for which close substitutes exist, courts typically award damages as the remedy. The victim can use the damages to purchase substitute performance. Examples include new cars, wheat, televisions, and stock in public companies.

To understand the role of substitution, consider two contrasting examples. First, the K ticket agency breaks its promise to supply a pair of opera tickets, so the customer has to pay more to purchase equivalent tickets from a “scalper” on the night of the performance. The tickets are equivalent, so the difference in their price perfectly measures the expectation damages. Second, assume that a dealer in rare books breaks his promise to sell the only manuscript copy of William

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16Sometimes the court orders the promisor to do something similar to what was promised, and sometimes the court forbids the promisor from performing with anyone other than the promisee.
Faulkner’s *The Sound and the Fury* to a wealthy collector. The value of this unique manuscript is highly subjective, an amount that the court cannot determine accurately. The computation of expectation damages in this case is highly imperfect. Consequently, the court may order the dealer to deliver the manuscript to the collector.

In general, the error in the court’s estimation of expectation damages decreases as the ease of substitution increases for the promised performance. The error decreases because the court can award damages at a level enabling the victim to purchase a substitute for the promised performance. When a good has a close substitute that is readily available in the market, no one is likely to value the good at much more than the price of the available substitute.

In contrast, the remedy of specific performance entitles the promisee to the good itself, rather than its value. By adopting the remedy of specific performance for breach of promise to deliver unique goods, courts avoid the impossible task of determining the promisee’s subjective valuation. Later we compare the advantages and disadvantages of damages and specific performance.

**8. Party-Designed Remedies: Liquidated Damages**  Contracts often specify the remedy for breaching one of their terms. The contract might stipulate a sum of money that the promise-breaker will pay to the innocent party (“liquidated damages”). Alternatively, the parties may leave valuable assets on deposit with a third party and specify that the assets should be given to the victim in the event of a breach (“performance bonds”). Or the parties may specify a process for resolving disputes between them, such as arbitration by the International Chamber of Commerce applying the law of New York.

Courts examine terms specifying remedies more skeptically and critically than other terms in contracts. Instead of enforcing terms specifying remedies, courts sometimes set the terms aside and substitute court-designed remedies. To illustrate, sellers in America frequently present buyers with a form contract stipulating that disputes will be resolved by arbitration in the seller’s home city. Thus, a manufacturer in New York City offers a contract to a buyer in Los Angeles specifying that disputes will be resolved by the American Arbitration Association in New York City. If the buyer sues the seller in a California court, the court will be reluctant to concede jurisdiction to the arbitrator in New York City (although this appears to be changing so as to give the parties greater flexibility in specifying a dispute arising from their agreement will be heard and according to what law).

The common law and civil law traditions differ with respect to enforcing penalty clauses in contracts. A common law tradition prevents courts from enforcing terms stipulating damages that exceed the actual harm caused by breach. Courts call a term a “penalty” when it stipulates damages exceeding the actual harm (or a reasonable prior estimate of that harm) caused by breach. Courts call a term “liquidated damages” when it stipulates damages that do not exceed the actual harm (or are a reasonable prior estimate of that harm) caused by breach. (A “liquid asset” is money or easily converted to money.) The common law tradition enforces liquidated damages and withholds enforcement of penalties. In contrast, courts in civil law countries tend not to object to penalties as such. Courts in
civil law countries show more willingness to enforce contract penalties or to reduce them without setting them aside.

Some economists now believe that the civil law countries are right to enforce penalty clauses. Stipulation of damages exceeding the requirements for compensation can serve two functions. First, the punitive element may be considered as payment on an insurance contract written in favor of the innocent party by the breaching party. This situation arises when one party to the contract places a high subjective valuation on performance of the contract, and the other party is the best possible insurer against its loss.

To illustrate, consider professors Goetz and Scott’s delightful example of the Anxious Alumnus. An alumnus of the University of Virginia charters a bus to carry his friends to the site of an important basketball tournament where his college team will play. The alumnus is anxious about mishaps. Suppose the bus breaks down; suppose inclement weather prevents the bus from proceeding; or suppose traffic is so heavy that the fans do not arrive in time. He values performance of the contract to deliver him to the game at far more than the price he has paid to hire the bus, yet the subjective value is too speculative for courts to measure accurately. So the bus company agrees to pay the alumnus a stipulated penalty in the event of the bus company’s breach. In exchange, the alumnus agrees to pay the bus company a price for renting the bus that exceeds the usual price. The difference between the contract price and the usual price represents the premium on an insurance policy written by the bus company in favor of the alumnus. The insurance policy compensates the alumnus for his subjective losses in the event that the bus company’s fault prevents him from attending the basketball game.

A second reason for enforcing penalty clauses is that they often convey information about the promisor’s reliability. To illustrate, consider a contract that specifies the date for completing a construction project. Perhaps the builder is certain of her ability to complete performance by the specified date, but the buyer doubts the builder’s ability to meet the deadline. If the builder promises to pay a large penalty for late construction, she signals her certainty about finishing on time. A penalty clause may be the cheapest way for the builder to communicate credibility to the buyer.

A third reason to enforce penalty clauses, as explained by Avery Katz, is that most penalties can be restated as bonuses. To illustrate, assume that Seller receives $90 from Buyer for a promise to deliver goods that Buyer values at $100 in one month. Further assume that the parties would like to stipulate that Seller pays Buyer damages of $125 for breach of contract. This stipulation, however, creates a penalty of $25 for breach, so the courts might not enforce the penalty. The first

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row of the following table summarizes the numbers for the penalty contract. With performance of the penalty contract, Buyer’s net payoff equals \(100 - 90 = 10\) and Seller’s net payoff equals \$90\). With breach of the penalty contract, Buyer’s net payoff equals \(125 - 90 = 35\) and Seller’s net payoff equals \(90 - 125 = -35\).

To increase the probability of enforcement by the court, the parties can reword the contract so that a bonus for performance replaces a penalty for breach in the language of the contract, but the two contracts have identical material outcomes. To achieve this end, the alternative contract stipulates that Buyer pays Seller $65 on signing the contract and Buyer pays Seller $25 as a bonus for performance. Buyer’s net payoff from performance thus equals \(100 - 65 - 25 = 10\) and Seller’s net payoff equals \(65 + 25 = 90\), which is the identical outcome as with the penalty contract. In the event that Seller breaches the bonus contract, Seller pays Buyer’s actual damages of 100. Thus Buyer’s net payoff from breach equals \(100 - 65 = 35\), and Seller’s net payoff equals \(65 - 100 = -35\), which is the identical outcome as with the penalty contract. The penalty contract apparently contains an illegal penalty and the bonus contract apparently contains a legal bonus, even though the contracts are materially identical. The point of this example is that not enforcing penalties creates incentives to re-draft identical contracts with bonuses.

<table>
<thead>
<tr>
<th>CONTRACT</th>
<th>PERFORMANCE</th>
<th>ACTUAL LOSS</th>
<th>PENALTY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PRICE</td>
<td>BONUS</td>
<td>FROM BREACH</td>
</tr>
<tr>
<td>penalty contract</td>
<td>90</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>bonus contract</td>
<td>65</td>
<td>25</td>
<td>100</td>
</tr>
</tbody>
</table>

**QUESTION 7.6:** Earlier we explained that specific performance is the usual remedy for breach of a contract to deliver goods for which no close substitutes exist, whereas damages are the usual remedy when close substitutes exist. Use the “closeness of substitutes” to explain why the death of an artist releases his estate from any contracts that he signed to paint portraits, whereas the death of a house painter does not release her estate from contracts that she signed to paint houses.

**QUESTION 7.7:** Restitution is usually inadequate to compensate the victim. What practical reasons do courts have for using restitution as a remedy?

**QUESTION 7.8:** Assume that a swindler must disgorge her profits if she gets caught. In order to make swindling unprofitable (expected value of swindling equals zero), how high must the probability of getting caught be?

**QUESTION 7.9:** Can you describe conditions when specific performance is an impossible remedy? Can you describe conditions when specific performance is an unfair remedy to a third party?
CHAPTER 7  Topics in the Economics of Contract Law

(Hint: Suppose the dealer in New York breached his contract and sold Faulkner’s manuscript to someone else.)

**QUESTION 7.10:** Traditionally, an innocent party to a breach of contract cannot receive punitive damages. However, if we distinguish between involuntary and willful breach of contract, do you see an economic argument in favor of compensatory damages in the case of involuntary breach and the possibility of punitive damages in the case of willful breach? (See William S. Dodge, *The Case for Punitive Damages in Contracts*, DUKE L. J. (1999), and *Patton v. Mid-Continent Systems Inc.* 841 F.2D 742 (7th Cir. 1988) (Posner, J.).)

**WEB NOTE 7.2**

Our website discusses some further issues having to do with stipulated damages, includes an excerpt from a decision by Judge Posner in which he had to determine the enforceability of a penalty clause, and of other remedies.

**B. Models of Remedies**

Having described the remedies for breach of contract, we now analyze them. An economic analysis of remedies models their effects on behavior. Remedies affect many kinds of behavior, but we cannot model all of them.18 Our analysis concentrates on these three:

1. the promisor’s decision to breach or perform,
2. the promisor’s investment in performing, and
3. the promisee’s investment in reliance on the promise.

**Efficient Breach and Performance** As we saw in Chapter 6, sometimes breaching a contract is more efficient than performing. Breaching is more efficient than performing when the costs of performing exceed the benefits to all parties. The costs of performing exceed the benefits when a contingency materializes that makes the resources needed for performance more valuable in an alternative use.

Two types of contingencies reorder the value of resources. First, an unfortunate contingency increases the cost of performance. For example, a crippling strike imposes prohibitive costs on timely completion of a construction project. Consequently, the resources needed to complete construction on time can be put to more valuable use in another construction project unaffected by the strike. Second, a fortunate

18Here is a partial list of affected behaviors: (1) searching for trading partners; (2) negotiating exchanges; (3) drafting contracts (explicitness); (4) keeping or breaking promises; (5) taking precaution against events causing breach; (6) acting in reliance on promises; (7) acting to mitigate damages caused by broken promises and; (8) resolving disputes caused by broken promises.
contingency makes nonperformance even more profitable than performance. For example, the seller who promises to deliver a good to a buyer might discover a third person who values it even more. We will discuss each type of contingency in turn.

a. Unfortunate Contingency  We modeled an unfortunate contingency in the preceding chapter by using the agency game. In the relevant version of the agency game, the agent (second player) promises to cooperate with the principal (first player). When making the promise, the future cost of cooperating remains uncertain. The cost of cooperating might be low or high. Low costs are likely and high costs are unlikely. High costs of performing are an unfortunate contingency that makes breach efficient.

Figure 7.2, which reproduces Figure 6.3 from the preceding chapter, depicts these payoffs in a matrix. Cooperating sometimes costs the agent zero and sometimes costs 1.5. The first column indicates the payoffs when cooperation costs zero, and the second column indicates payoffs when cooperation costs 1.5. The third column indicates the payoffs from appropriation.

Figure 7.2 describes payoffs when the parties do not have an enforceable contract. If the principal invests, then the agent receives more from appropriating than cooperating. Consequently, the agent’s best move is to appropriate. The principal, who anticipates that the agent will appropriate, has no legal remedy. Consequently, the principal’s best move is “don’t invest.” Thus, absence of an enforceable contract in Figure 7.2 prevents the parties from cooperating.

The payoffs in the agency game with an enforceable contract are shown in Figure 7.3, which reproduces Figure 6.4 from the preceding chapter. If the agent performs, then the principal’s net payoff equals .5, as shown in columns one and two of Figure 7.2 and Figure 7.3. The agent may perform voluntarily to satisfy the contract, in which case columns one and two illustrate keeping the contract. Alternatively, the agent may perform involuntarily to satisfy a court order, in which case columns one and two illustrate the remedy of specific performance for breach. The remedy of expectation damages puts the principal in the same position as if the agent had performed. In column three, the principal’s net payoff after breach and damages equals .5, so column three depicts expectation damages.
Consider whether the principal in Figure 7.3 maximizes profits by investing or not investing. The first row in the figure indicates that the principal receives .5 from investing, regardless of whether the agent performs or breaches. Alternatively, the second row in the figure indicates that the principal receives a payoff of zero from not investing. The principal maximizes his or her payoff by investing.

Now consider whether the agent in Figure 7.3 maximizes profits by performing or breaching. If the cost of performance is low, the agent’s best move is to perform, which pays .5. If the cost of performing is high, the agent’s best move depends on the remedy for breach. Damages and specific performance yield different decisions. First consider the remedy of damages. The remedy of damages gives the agent a choice between performing or breaching and paying damages. The agent’s payoff from performing at high cost in Figure 7.3 equals \( \frac{1}{2} \). Alternatively, the agent’s payoff from breaching and paying damages equals \( \frac{1}{2} \). Thus, the agent in Figure 7.3 breaches and pays damages whenever the cost of performance is high.

Now consider the remedy of specific performance. This remedy gives the principal a right to the agent’s performance, regardless of its cost. If the principal asserts this right, then the agent will be forced to perform even when the costs of performance are high. If the principal in Figure 7.3 forces the agent to perform at high costs, the agent receives \( \frac{1}{2} \) and the principal receives .5. Instead of exercising this right, however, the principal might respond to the unfortunate contingency by renegotiating the contract. If renegotiations succeed, the principal will agree to accept damages in exchange for allowing the agent to breach. When the agent breaches, the joint payoffs equal zero in Figure 7.3. Alternatively, if renegotiations fail, the principal will exercise his or her right to performance. The joint payoffs for performing at high cost equal \( (-1.0 + .5) \) or \(-0.5\) in Figure 7.3. The difference in joint payoffs between performing at high cost and breaching equals the surplus from successful renegotiations. The surplus from successful renegotiations in Figure 7.3 thus equals \( 0 - (-1.0 + .5) = .5 \).

Successful renegotiation allows the parties to share the surplus of .5. We discussed the division of a bargaining surplus at length in Chapter 4. Rationality, alone, does not generally prescribe a division of the surplus. Consider a reasonable way to divide the surplus. Without renegotiating the contract, the principal can force the agent to perform, which yields a payoff of .5 to the principal. The principal
must receive at least .5 in order to benefit from renegotiating the contract. In addition to .5, the principal will want a share of the surplus. A reasonable division of the surplus gives half of it, or .25, to each player. Consequently, a reasonable renegotiation of the contract gives the principal (.5 + .25 = .75). The agent pays .75 to the principal in exchange for not exercising his or her right to specific performance. (Can you demonstrate that this solution also gives the agent the payoff that he or she can get independently plus half the surplus from cooperation?19)

Efficiency requires the players to choose the actions that maximize the sum of the payoffs to the principal and agent. The sum of the payoffs is found by adding the two numbers in each cell in Figure 7.3. It is easy to see that to perform at low cost is more efficient than breaching, whereas breaching is more efficient than performing at high cost. We have shown that the remedy of damages causes the agent to perform at low cost and to breach rather than to perform at high cost. In contrast, the remedy of specific performance causes the agent to perform at low cost, and the agent sometimes breaches and sometimes performs at high cost. The agent performs at high cost when renegotiations fail. Consequently, the damage remedy is always efficient, whereas specific performance is sometimes inefficient.

The difference in efficiency between the two remedies is easy to understand. The remedy of damages gives the promisor the choice of performing or breaching and paying damages. The promisor can choose the cheaper alternative.20 In contrast, the remedy of specific performance gives the promisee the right to performance, regardless of its costs. Exercising this right in the wrong circumstances causes the inefficiency. To avoid the inefficient exercise of the right to specific performance, the parties must succeed in renegotiating the contract. Successful renegotiation can restore efficiency to the decision to breach. As long as the principal and agent can renegotiate successfully, the damage remedy affects distribution but not efficiency.

You should already know this conclusion about renegotiations from studying the positive Coase Theorem in Chapter 4, especially the example of the laundry and the electric company. According to the positive Coase Theorem, private bargaining under zero transaction costs always succeeds in allocating resources efficiently. Given zero transaction costs, the law influences distribution but not efficiency. We have just applied the Coase Theorem to contracts. We found that the agent will breach efficiently, regardless of the rule of law, provided that renegotiations succeed. Given costless renegotiations, the legal remedy for breach of contract influences distribution but not efficiency. Given costly renegotiations, however, the damage remedy for breach of contract has an advantage over specific performance, just as compensation has an advantage over injunction in nuisance cases with high negotiations costs.

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19Without renegotiation, the agent will be forced to perform at high costs, which yields the agent a payoff equal to −1.0. A reasonable renegotiation gives the agent half the surplus, or .25. Therefore, the agent’s payoff after renegotiation should equal −1.0 + .25 = −.75.

20Recall that perfect expectation damages internalize the full cost of breach to the promisor. Consequently, the promisor chooses the cheaper alternative based on social costs, as required for efficiency.
WEB NOTE 7.3

In this section we raised the possibility of the parties’ renegotiating the terms of the contract after it had been formed but before it had been fully performed. This issue of contract modification is an important and intriguing one about which there has been some interesting economic analysis. See our website for more.

b. Fortunate Contingency The preceding discussion explained that when an unfortunate contingency makes performance uneconomical and the promisor wants to avoid performing, the injunctive remedy increases the promisee’s bargaining power in the ensuing negotiations relative to a damages remedy. Now we apply this line of argument to a fortunate contingency. A fortunate contingency is typically an alternative contract that is even more profitable than the original contract. When a fortunate contingency makes the promisor want to avoid performing on the original contract in order to profit even more from an alternative contract, the injunctive remedy increases the promisee’s bargaining power in the ensuing negotiations relative to a damages remedy. With increased bargaining power, the promisee can extract a larger share of the surplus created by the fortunate contingency.

To demonstrate this fact, assume that person A values living in his house at $90,000, and person B values living in A’s house at $110,000. A promises to sell the house to B for $100,000, which will create a surplus of $20,000. Before completing the sale, however, person C appears on the scene and offers to buy the house from A. C values the house at $126,000. C offers to pay $118,000 for the house. C’s appearance creates a new, more profitable alternative to the original contract. Transferring the house from A, who values it at $90,000, to C, who values it at $126,000, creates a surplus of $36,000. Figure 7.4 summarizes these numbers in the first column, which is labeled “Value placed on house.”

Assume that the appearance of C causes A to breach the contract by refusing to sell the house to B. B sues A. Consider the payoffs to the three parties when the

**FIGURE 7.4**

**Remedies.**

<table>
<thead>
<tr>
<th></th>
<th>Value placed on house</th>
<th>Distribution of surplus if no remedy</th>
<th>Distribution of surplus if remedy is specific performance</th>
<th>Distribution of surplus if remedy is expectation damages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person A</td>
<td>$90,000</td>
<td>$28,000</td>
<td>$10,000</td>
<td>$18,000</td>
</tr>
<tr>
<td>Person B</td>
<td>$110,000</td>
<td>$0</td>
<td>$18,000</td>
<td>$10,000</td>
</tr>
<tr>
<td>Person C</td>
<td>$126,000</td>
<td>$8,000</td>
<td>$8,000</td>
<td>$8,000</td>
</tr>
<tr>
<td>Total</td>
<td>$36,000</td>
<td>$36,000</td>
<td>$36,000</td>
<td>$36,000</td>
</tr>
</tbody>
</table>
law gives \( B \) no remedy, thus allowing \( A \) to sell the house to \( C \). \( A \)'s payoff equals the difference between the value of the house to him ($90,000) and the sale price to \( C \) ($118,000), or $28,000. \( B \)'s payoff equals zero. \( C \)'s payoff equals the difference between the purchase price ($118,000) and the value of the house to her ($126,000), or $8,000. Figure 7.4 summarizes these numbers in the second column, which is labeled “Distribution of surplus if no remedy.”

Now assume that the courts respond to \( B \)'s suit against \( A \)'s breach by the remedy of specific performance. Specific performance is an order from the court for \( A \) to sell the house to \( B \) for $100,000 as promised. \( A \)'s payoff equals the difference between the value of the house to him ($90,000) and the sale price to \( B \) ($100,000), or $10,000. \( B \) will presumably resell the house to \( C \) for $118,000. \( B \)'s payoff equals the difference between her purchase price ($100,000) and her sale price ($118,000), or $18,000. \( C \)'s payoff equals the difference between the purchase price ($118,000) and the value of the house to her ($126,000), or $8,000. Figure 7.4 summarizes these numbers in the third column, which is labeled “Distribution of surplus if remedy is specific performance.”

Finally, assume that the courts respond to \( B \)'s suit against \( A \)'s breach by the remedy of damages. \( A \) breaches the contract with \( B \) and sells the house to \( C \) for $118,000. \( A \)'s payoff equals the difference between the value of the house to him ($90,000) and the sale price to \( B \) ($118,000), or $28,000. Having obtained a surplus of $28,000, \( A \) must now pay damages to compensate \( B \) for breaching the contract. The extent of the damages will determine the division of the surplus of $28,000 between \( A \) and \( B \). Assume that the damages have been designed by the court to put \( B \) in the position she expected to be in if \( A \) had delivered the house and \( B \) had kept it. \( B \) expected to get a house that she values at $110,000 for a price of $100,000, yielding an expected surplus of $10,000. By this calculation, \( B \)'s expectation damages equal $10,000. Expectation damages produce the result that \( A \) gets $18,000 in surplus, \( B \) gets $10,000 in cash, and \( C \) gets a surplus of $8,000 on purchasing the house. Figure 7.4 summarizes these numbers in the fourth column, which is labeled “Distribution of surplus if remedy is expectation damages.”

Now let us compare the remedies of specific performance and expectation damages. Economic efficiency requires allocating resources to their highest-valued use. \( C \) values the use of the house more than \( A \) or \( B \). Thus, an efficient remedy requires that \( C \) get the house. With specific performance, \( C \) buys the house from \( B \), and \( B \) gets more of the surplus than \( A \). With expectation damages, \( C \) buys the house from \( A \), and \( A \) gets more of the surplus than \( B \). Either court-designed remedy creates efficient incentives for allocating the house, but the remedies differ in the pathway of the sale and the distribution of the surplus from exchange. As we showed in the previous section and in Chapter 4, given zero transaction costs, the law affects distribution but not efficiency. Figure 7.4 expresses this result. As long as \( A \), \( B \), and \( C \) can bargain successfully at zero transaction costs, the damages remedy affects distribution but not efficiency.

The remedy of expectation damages gives the promisor a choice between performing or breaching and paying damages. The distribution of the surplus favors the promisor when the remedy for breach is damages. In contrast, when the
remedy is specific performance, the distribution of the surplus favors the promisee. The Coase Theorem implies that court-designed remedies differ with respect to efficiency only when transaction costs are positive. When transaction costs are positive, the most efficient court-designed remedy minimizes the transaction costs of moving the good to its highest-valued use. Applied to our example, the most efficient court-designed remedy minimizes the transaction costs of moving ownership of the house from A to C. Figure 7.4 assumes the move can be made with zero transaction costs, which implies that both remedies are equally efficient (but differ in distributional consequences).

Earlier we explained that the consequences of protecting an entitlement by a damage remedy or an injunctive remedy is much the same in property and contract law. When property owners can negotiate at little cost, or the parties to a contract can renegotiate at little cost, the injunctive remedy strengthens the bargaining position of the entitled party without affecting the outcome’s efficiency. When negotiations are costly, however, the remedy may affect their magnitude. As in property disputes, contract renegotiations may be simpler when the remedy is specific performance.

To see why, consider the task faced by the court when computing damages for A’s breach of contract with B. To determine compensatory damages, the court must estimate the value that B places on the house. The subjective valuation of the buyer is difficult for courts to estimate. The buyer’s subjective valuation must exceed the sale price, but by how much? Lawyers could use up a lot of money arguing about whether B valued the house at $105,000, $110,000, or $125,000.21 This uncertainty clouds negotiations by the parties to settle the dispute out of court. Unlike damages, the remedy of specific performance does not present courts with a problem of valuation. When the court applies this remedy, the court orders A to sell the house to B at the contract price. The court does not have to set a price. Nor does a transfer of the house to B have to occur. Bargaining may replace performance. In bargaining, each side will be uncertain about the other’s valuation of the house. Many advantages exist to having markets, not courts, resolve price uncertainty. Some economists think that the problem of valuation by courts is so severe that contract law should adopt specific performance more widely as a remedy.22

**QUESTION 7.11:** Assume that A values his house at $90,000. B is willing to pay $110,000 for A’s house in order to relocate closer to work. (Forget about person C for purposes of this question.) After signing a contract, B’s employer announces that the company will move to another city. In view of this fact, the value of the house to B is reduced to $75,000. From an efficiency viewpoint, who should own the house, A

21Determining the extent of damages in litigation is a specific form of what economists call the “problem of preference revelation.” The general problem is to close the gap between objective prices and subjective values. Economists have had limited success trying to solve this problem.

QUESTION 7.12: Give examples of unfortunate and fortunate contingencies that could make breach of contract more efficient than performance. Give reasons why the parties might not insert explicit terms in the contract to deal with these contingencies, such as a term excusing breach when performance is very costly.

QUESTION 7.13: State the Coase theorem as applied to remedies for breach of contract.

QUESTION 7.14: Assume that a fortunate contingency makes breach efficient for a sales contract, and assume that the parties cannot renegotiate the contract. Explain why the remedy of damages can save transaction costs by reducing the number of sales required to move the good to the person who values it most. Explain why the remedy of specific performance enables the court to avoid the problem of subjective valuations of the good.

C. Investment in Performance and Reliance

We have compared the incentive effects of two different remedies (expectation damages and specific performance) on one kind of decision (performance or breach). Now we consider the incentive effects of several different remedies on two kinds of decisions (performance and reliance). Our analysis of property law revealed a paradox when we compared state actions that require compensation of private property owners for reductions in their property values (“takings”) and state actions that require no compensation (“regulations”). Specifically, requiring compensation gives efficient incentives for state action and inefficient incentives for private owners to invest, whereas not requiring compensation has the opposite effect. We encounter the same paradox in contract law when we consider incentives effects on two kinds of decisions, performance and reliance.

1. Paradox of Compensation

We begin by explaining the paradox of compensation in contracts. A contract imposes obligations on the promisor that are typically costly to perform. To perform or to increase its probability, the promisor must invest. The promisor has an incentive to invest more on performing when liability for breach is higher. Conversely, the promisee can increase the value of performance by relying, but relying also increases the loss from breach. The promisee has an incentive to rely more when liability for breach is higher.

The following example illustrates the situation.

Example—The Waffle Shop: Yvonne owns a restaurant for economists that is called the Waffle Shop because of what it serves and whom it serves. Her business prospers so that she needs a larger facility. She enters into a contract with Xavier, a builder, who promises to construct the new restaurant for occupancy on September 1. Xavier knows that events
could jeopardize completing the building on time, such as striking plumbers, recalcitrant city inspectors, or foul weather. He can reduce the probability of late completion by working overtime before the plumbers’ contract expires, badgering the city inspectors, or accelerating work on the roof.

Yvonne anticipates a surge in business when she opens the new facility. To accommodate the surge in business, she needs to order more food than she can use in her old restaurant. She would like to order supplementary food for delivery on September 1 to assure continuous service, but she risks disposing of the supplementary food at a loss if the building is not completed on time.

Increasing the damages that Xavier must pay Yvonne for late completion of the building increases the incentives for Xavier to invest in performing and also increases the incentives for Yvonne to rely.

Earlier we compared perfect damage measures and concluded that expectation damages are at least as great as opportunity-cost damages, which are at least as great as reliance damages. So promisor’s incentives to invest in performing diminish as the basis of damages changes from expectation to opportunity-cost to reliance. The same is true of Yvonne’s incentives to invest in reliance.

What level of damages gives efficient incentives to invest, so that the promisor does not over- or under-perform? For efficient incentives, the promisor must fully internalize the loss that the promisee suffers from breach. Perfect expectation damages cause the promisor to internalize the loss fully, as required for efficiency. Since perfect expectation damages are at least as great as perfect opportunity cost damages, the latter must often allow the promisor to externalize part of the cost of breach. Similarly, since perfect opportunity-cost damages are at least as great as perfect reliance damages, the latter must often allow the promisor to externalize even more of the cost of breach.

Turning to the promisee, what level of damages gives efficient incentives to rely, so that the promisee does not over- or under-rely? For efficient incentives, the promisee must fully internalize the loss from breach, which means that the promisee should receive no damages. As the measure of damages increases from reliance to opportunity-cost to expectation damages, the promisee externalizes an increasing fraction of the loss from breach. Perfect expectation damages cause the promisee to externalize 100% of the loss. Applied to contracts, the paradox of compensation is that, starting from perfect expectation damages, decreasing damages worsens the promisor’s incentives and improves the promisee’s incentives.

To illustrate the paradox of compensation, return to the example of Xavier and Yvonne. If Xavier is liable for the actual loss that late completion of the building causes, then Xavier fully internalizes Yvonne’s benefits from timely completion. Consequently, he has efficient incentives to balance his cost of performing and the resulting benefit to Yvonne. Unfortunately, Xavier’s liability distorts Yvonne’s incentives. If Xavier is liable for the actual loss that late completion of the building causes, then Yvonne externalizes the cost of relying. In effect, Xavier will provide her with complete insurance against late completion. Consequently, she will have an incentive to act as if timely completion were certain and to order enough food for delivery on September 1.
Conversely, if Xavier is not liable for late completion, then Xavier externalizes the cost that late completion imposes on Yvonne, which gives inefficient incentives to Xavier and efficient incentives to Yvonne.

Figure 7.5 summarizes these facts. The horizontal axis measures the promisor’s liability to pay damages, and the vertical axis measures the promisee’s entitlement to receive damages. Along the 45-degree line, the promisor’s liability to pay damages equals the promisee’s entitlement to receive damages. With expectation damages, the promisor internalizes 100% of the cost of breach, so he has efficient incentives, but the promisee internalizes 0% of the cost of breach, so she has inefficient incentives. Conversely, at graph’s origin where damages are zero, the promisor internalizes 0% of the cost of breach, so he has inefficient incentives, but the promisee internalizes 100% of the cost of breach, so she has efficient incentives. In between these extremes lie opportunity-cost damages and reliance damages, which cause both parties to internalize less than 100% and more than 0% of the cost of breach, so neither one has incentives that are fully efficient.

Here is the general form of the *paradox of compensation*. (1) In order for the injurer to internalize costs, he must fully compensate the victim. (2) In order for the victim to internalize costs, she must receive no compensation for her injuries. (3) In private law, compensation paid by the injurer equals compensation received by the victim. (4) Therefore, private law cannot internalize costs for the injurer and the victim as required for efficiency.
This paradox afflicts all areas of private law. You met the paradox of compensation in Chapter 4 when we discussed compensation for the taking of property by the state, and you will meet the paradox again in the next chapter when we consider compensation for accidents. In contract law, this paradox takes the following form. (1) In order for the promisor to internalize the benefits of precaution, he must fully compensate the promisee for breach. (2) In order for the promisee to internalize the costs of reliance, she must receive no compensation for breach. (3) In contract law, compensation paid by the promisor for breach equals compensation received by the promisee. (4) Therefore, contract law cannot internalize costs for the promisor and promisee as required for efficiency.

2. Contract Solutions to the Paradox of Compensation

The paradox of compensation predicts that compensating the victims of breach will cause them to over-rely. The problem of over-reliance, however, is not so pervasive as this prediction suggests. Some contracts pose no problem of over-reliance because both parties want the promisee to rely as if performance were certain. Also, some contracts that pose a problem of over-reliance solve it by a variety of conceptual mechanisms. The paradox of compensation is the key to understanding these mechanisms. “Why didn’t the dog bark?” Great sleuths like Sherlock Holmes and Miss Marple sometimes crack a mystery by noticing that something did not happen. If over-reliance does not happen, then you should use the paradox of compensation to understand why.

Before discussing legal mechanisms to avoid the promisee’s over-reliance, we will explain a general strategy for solving the paradox of compensation. Efficient incentives often require internalization of marginal costs, not internalization of total costs. Sophisticated damage measures cause the promisee to internalize the marginal costs of reliance, but not necessarily the total costs of reliance.

One way to achieve this goal is to base compensation on the promisee’s hypothetical damages, not the promisee’s actual damages. Perfect hypothetical expectation damages equal the gain that the promisee who relied optimally would have obtained from performance. Thus, perfect hypothetical expectation damages restore the promisee who relied optimally to the position that he would have enjoyed if the promise had been kept. Perfect hypothetical expectation damages, however, do not compensate for actual reliance. The promisee bears any increase in the promisee’s losses caused by the promisee’s actual reliance.

To illustrate, assume that breach causes the promisee who relies optimally to lose $100, and breach causes the promisee who over-relies to lose $125. Under these assumptions, perfect hypothetical expectation damages equal $100. If the court awards perfect hypothetical expectation damages, then the promisee who over-relies and suffers a loss of $125 from breach still receives $100 in damages from the court. The additional loss of $25 from over-reliance is internalized by the promisee. Thus the promisee internalizes the marginal cost of his actual reliance, as required for efficient incentives.

In the preceding case, the parties could give themselves efficient incentives by inserting a liquidation clause into their contract that stipulates damages of $100 for breach. If the parties fail to do so, the courts might decide to award perfect...
hypothetical expectation damages. Instead of approaching the problem directly, however, the courts might approach it indirectly through particular contract doctrines. We will explain the most famous such doctrine, called foreseeability.

Foreseeable reliance equals the amount that the promisor could reasonably expect the promisee to take in the circumstances. In contrast, unforeseeable reliance exceeds the amount that the promisor could reasonably expect the promisee to take in the circumstances. The foreseeability doctrine in common law compensates for foreseeable reliance and does not compensate for unforeseeable reliance. So, the foreseeability doctrine imposes a cap on damages for breach of contract. If “foreseeable” reliance equates with “optimal” reliance, then the foreseeability doctrine caps damages at the level required for efficient incentives.

The famous case of Hadley v. Baxendale established the principle that over-reliance is unforeseeable, and, consequently, noncompensable. To summarize the facts of this case, Hadley owned a gristmill; the main shaft of the mill broke; and Hadley hired a shipping firm where Baxendale worked to transport the shaft for repair. The shipper did not deliver the shaft expeditiously. The damaged shaft was the only one in Hadley’s mill, which remained closed awaiting return of the repaired shaft. After the tardy return of the repaired shaft, Hadley sued for breach of contract and asked for damages equal to his profits lost while his mill remained closed awaiting the return of the shaft. The defendant claimed that the measure of damages (if there was a breach) should be much less. The shipper assumed that Hadley, like most millers, kept a spare shaft. The shipper contended that Hadley did not inform him of the special urgency in getting the shaft repaired. The shipper prevailed in court on the damages issue, and the case subsequently stands for the principle that recovery for breach of contract is limited to the foreseeable damages.

We explained that the promisee has incentives for efficient reliance when damages are invariant with respect to reliance. The rule of Hadley is not the only way to produce this result. Liquidated damages are also invariant with respect to reliance. Stipulating an exact amount of damages in the contract is a common mechanism used to prevent over-reliance.

According to the doctrine of Hadley, a promisee who faces unforeseeable damages must inform the promisor in advance in order to recover damages fully. For this reason, the Hadley doctrine forces the exchange of information. Theorists have developed useful language to describe these facts. Hadley creates a “penalty default rule” that is “information-forcing.”

23Hadley contended that he did tell the shipper that repairs were urgent because this was his only shaft.
24The rule in Hadley v. Baxendale may be found in Restatement (Second) of Contracts § 351(1) (1979).
A clever game theorist might note that, under certain circumstances, a market mechanism reveals the facts about reliance even without the law forcing this result. Consider a world with many low-reliance promisees and a few high-reliance promisees, so high reliance is unforeseeable. Without the rule of Hadley, each low reliance promisee will want to reveal this fact to the promisor and then negotiate a lower price for the contract. Conversely, the rule of Hadley causes each high reliance promisee to reveal this fact to the promisor, and the promisor responds by demanding a higher price for the contract. Thus the market mechanism and the Hadley rule both cause revelation of the facts. The difference is that the Hadley rule causes the high-reliance promisees to make the revelation, whereas the market mechanism causes the low-reliance promisees to make the revelation. It is cheaper for the few to reveal their special circumstances than for the many to reveal their ordinary circumstances. Consequently, the Hadley rule reduces the transaction costs of revealing the facts about the promisee’s expected damages from breach.

**QUESTION 7.15:** Explain the difference between foreseeable events and events actually foreseen.

**QUESTION 7.16:** Assume that you have taken some very valuable photographs. You want to give notice of this fact to the developer so that he will be liable for exceptional damages in the event that he damages the film. How could you succeed in giving notice for purposes of the law?

**QUESTION 7.17:** Restraining reliance before breach reduces the harm that it causes. “Mitigating” damages after breach also reduces the harm. In the Waffle Shop case (below), for example, Yvonne can mitigate harm by reselling the supplemental food order to another restaurant. The common law requires the promisee to mitigate damages. Specifically, the promisee must take reasonable actions to reduce losses from the promisor’s breach. Describe the efficient amount of mitigation. How could the mitigation requirement create an incentive for efficient mitigation?

The paradox of compensation is subtle and we have only explained some of its implications. To illustrate an unexplored topic, the promisee can often assist the promisor to perform. In the Waffle Shop example, Yvonne might know the state inspectors from whom Xavier needs various building permits. By assisting Xavier to obtain the building permits, Yvonne can help him complete the building on time. The damages that Yvonne receives from Xavier for late completion of the building affects the strength of her incentives to assist him in obtaining the permits. It turns out, however, that the analysis of promisee’s incentives to assist differs significantly from the analysis of promisee’s incentives to rely.25

25The reader who wants to know more about this should see R. Cooter and A. Porat, “Anti-insurance,” 31 J. Legal Studies 203 (2002).
Moving from one application of the paradox of compensation to another, such as moving from the promisee’s reliance to the promisee’s assistance, requires a flexible understanding of the underlying model. People trained in economics gain flexibility from math and graphs. If you are such a person, the mathematical appendix to this chapter is written for you.

II. FORMATION DEFENSES AND PERFORMANCE EXCUSES

The first part of this chapter concerned the question, “What should be the remedy for breaking an enforceable promise?” The second part of this chapter concerns the question, “What promises should be enforced?” Our answer develops the prescription from the preceding chapter, in which we divided contractual obligations into default rules and regulations. Default rules fill gaps in contracts in order to reduce transaction costs. Regulations prescribe terms for contracts in order to correct market failures. The remainder of this chapter analyzes some of the major doctrines that fill gaps and regulate contracts. We will analyze selected doctrines in the order in which they appear in Table 7.1, which categorizes contract regulations as forms of market failure. (Table 7.1 reproduces Table 6.1 in the preceding chapter.)

When defendants invoke these doctrines in contract disputes, they can make two different claims. First, defendants can claim that they have no legal obligation to the plaintiff because no contract exists between them. These claims rely on “formation defenses.” A formation defense asserts that the conditions for creating a contract were not satisfied. To illustrate, a man can argue that his promise to give a gift did not create a legal obligation.

Alternatively, defendants can concede that a contract exists, and then claim that they were excused from performing under the circumstances. These claims rely on “performance excuses.” A performance excuse admits the existence of a contract and denies liability for breach. Liability is typically denied because unusual contingencies prevented performance. To illustrate, a manufacturer may argue

Table 7.1

<table>
<thead>
<tr>
<th>ASSUMPTION</th>
<th>IF VIOLATED, CONTRACT DOCTRINE</th>
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<tbody>
<tr>
<td>A. Individual Rationality</td>
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<tr>
<td>1. stable, well-ordered preferences</td>
<td>1. incompetency; incapacity</td>
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<td>2. constrained choice</td>
<td>2. coercion; duress; necessity; impossibility</td>
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<tr>
<td>B. Transaction Costs</td>
<td></td>
</tr>
<tr>
<td>1. spillovers</td>
<td>1. unenforceability of contracts derogating public policy or statutory duty</td>
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<tr>
<td>2. information</td>
<td>2. fraud; failure to disclose; frustration of purpose; mutual mistake</td>
</tr>
<tr>
<td>3. monopoly</td>
<td>3. necessity; unconscionability or lesion</td>
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that she is excused from delivering the promised goods because her factory burned down. Imperfect procedures provide formation defenses, and unusual contingencies provide performance excuses.

A. Incompetence

A rational decision-maker can rank outcomes in order from least preferred to most preferred. In order to rank outcomes, the decision-maker must have stable preferences. If the decision-maker’s preferences are unstable or disorderly, then he or she cannot make competent judgments about his or her own interests. Such a person is legally incompetent. For example, children, the insane, and some mentally retarded adults are legally incompetent.

In special circumstances, a competent person may suffer temporary incompetence. For example, ingesting a prescription drug can incapacitate. A temporarily incapacitated person may be unable to make legally enforceable promises. To illustrate, if a seller uses high-pressure tactics to confuse a consumer into signing an unfavorable contract, the consumer’s lawyer may allege “transactional incapacity,” which means an incapacity to make this transaction under these circumstances.

Most people look after their own interests better than anyone else would do for them. However, incompetent people cannot look after themselves, so others must look after them. Law assigns responsibility for protecting incompetent people from harmful contracts to the competent people with whom they deal. Competent people must protect the interests of incompetent contractual partners or assume liability for failing to do so. Thus, law interprets a contract between a competent person and an incompetent person so as to serve the best interests of the latter. For example, the law will excuse a legally incompetent promisor from performing a contract that he signed against his interests, whereas the law will require a legally competent person to perform a contract that serves the interests of an incompetent promisee.

Competent contractual partners are usually better situated than anyone else to protect incompetent people from harmful contracts. In other words, competent contractual partners can usually protect incompetent contractual partners from harmful contracts at less cost than anyone else. Thus, the law assigns liability for harm suffered by incompetent contractual partners to the competent people who can avoid the harm at least cost. In this matter, the law follows the general principle of tort law, according to which liability for accidents should fall on the party who can avoid them at least cost. We develop this principle at length in the next chapter.

**QUESTION 7.18:** A young girl found an attractive stone in the woods and sold it to a jeweler for $1. Later, her family discovered that the stone was a rough diamond worth $700. Her family asked the court to void the contract for incompetency. Who was situated to protect the young girl in this transaction at least cost?

**QUESTION 7.19:** Suppose that excessive drinking causes temporary incompetence, and suppose that someone who has drunk too much
alcohol seeks to enter into a contract with someone who is sober. Contrast the incentive effects of enforcing and not enforcing such contracts.

B. Dire Constraints and Remote Risks

We proceed down Table 7.1 from incompetence to constrained choice. Most bargains occur under conditions of moderate constraint, but sometimes one of the parties to a bargain faces a dire constraint. A dire constraint leaves the decision-maker with little or no choice. Contract law treats dire constraints differently from moderate constraints. A dire constraint can provide the promisor with a defense or an excuse for breaking a promise. We will discuss several relevant doctrines.

1. Duress

Law prohibits people from making threats such as, “Work for me if you want your sister to come home safely from school,” or “I’ll ruin your business unless you sell it to me for $3500.” If a person extracts a promise by using such a threat, the promise is called a “contract made under duress” and is unenforceable.

Unlike threats, law permits people to make demands such as “Pay me $10 per hour or I’ll work for your competitor” or “My final offer for your car is $3500, take it or leave it.” Demands occur routinely in bargaining. The fact that a person extracted a promise by making such a demand does not provide a defense or excuse for not keeping the promise.

A theory of duress must distinguish between forbidden threats and permitted demands. We will use bargaining theory to draw the distinction. First we review the fundamentals of bargaining as explained in Chapter 4. In a bargaining situation, the parties can produce more by cooperating (“surplus”) than they can on their own. In order to cooperate, they must agree to divide the cooperative product. In dividing the cooperative product, both parties must receive at least as much as they can get on their own (“threat value”). Bargaining often involves exchanging demands and offers in an attempt to agree on the price of cooperation.

It is easy to see why the law permits people to make demands when bargaining. People know more about their own interests than anyone else, and people protect their own interests more persistently than anyone else. Most people can decide for themselves which cooperative ventures to join far better than anyone else can decide for them. The state can help people to make their own decisions by enforcing private bargains. Conversely, the state can prevent people from making their own decisions by prohibiting private bargains. Efficiency requires the state to facilitate private bargains, not to prohibit them.

In so far as the law forbids private bargains, a third party must decide who should cooperate with whom. Third parties typically lack the information and motivation to make such decisions. For example, the most complete prohibition of private bargains occurred under central planning in communist countries. Many planning officials cared for personal power more than efficiency, and those who cared about efficiency lacked the information to make decisions for other people. Central planning collapsed under the weight of its own inefficiency.
Many modest attempts by the state to restrict private bargains have failed. For example, most wealthy nations have abandoned attempts by the state to set prices for consumer goods. As an alternative to state planning or price-setting, the law typically enforces promises given in response to demands.

Bargaining, which involves demands and offers, is opposite from coercion, which involves threats. A contract usually involves a bargain in which one party gives something to induce the other party to make a promise. The bargain facilitates cooperation, which is productive. Both parties usually expect to gain from the bargain. Both parties usually want enforceability to secure a credible commitment to cooperate.

In contrast, a contract made under duress has the opposite traits. Duress usually involves extracting a promise by a threat. Enforcing the promise usually redistributes wealth from one person to the other. One party expects to gain from a coerced promise, and the other party expects to lose. One party wants enforceability of a coerced promise, and the other party does not.

To illustrate, contrast voluntary and coerced exchange of goods. When exchange is voluntary, the parties agree to trade because they both perceive an advantage. Ownership usually passes from someone who values a good less to someone who values it more. Allocative efficiency requires moving a good from someone who values it less to someone who values it more. In contrast, when exchange is involuntary, one party may be coerced into selling a good for less than its worth to him or her. Consequently, ownership may pass from someone who values it more to someone who values it less and that, of course, is allocatively inefficient.

Another important difference between bargains and coerced contracts concerns the consequence of a failed attempt to form a contract. If bargaining fails, the parties do not cooperate or create a surplus. Suppose I say, “Pay me $10 per hour or I’ll work for your competitor.” You offer $9 per hour, so I go to work for your competitor at $8 per hour. My best alternative bargain is apparently less productive than the proposed bargain.

In contrast, if coercion fails and the injurer acts on the threat, he or she destroys something valuable to the victim. To illustrate, suppose I say to you, “Work for me if you want your sister to come home safely from school.” If you refuse to be coerced and if I act on my threat, a tragic crime ensues. In general, failed bargains do not create, whereas failed coercion can destroy.

Even unexecuted threats cause waste by inducing their victims to invest in defense. To illustrate, suppose that the local bully “buys” bicycles in exchange for $10 and the promise not to thrash the owner. The owners of bicycles will try to protect themselves from the bully. Protecting themselves against the bully uses resources. The state can often provide protection against threats more cheaply than anyone else. By providing protection against threats, the state channels resources from defense to production.26

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26We already made this point in Chapter 4 when we discussed a lawless world in which people divide their time between growing, protecting, and stealing corn. State security ideally diverts effort from protecting and stealing corn to producing it.
We have explained that involuntary contracts usually redistribute wealth. The modern state suppresses private, involuntary redistributions of wealth, such as theft and fraud. The modern state reserves for itself the power to redistribute wealth involuntarily.

Economic analysis suggests the following rule for duress: A promise extracted as the price to cooperate in creating value is enforceable, and a promise extracted by a threat to destroy value is unenforceable. To illustrate the rule, consider this example. The captain of a boat in California contracts with the crew to make a fishing voyage to Alaska. After the boat reaches Alaska, the crew demands a bonus to finish the voyage. The captain cannot find replacements for the crew in Alaska, so he agrees. After the ship returns to California, the captain refuses to pay the bonus on the ground of duress.

This example illustrates the form of duress called the holdup problem. When negotiating the original contract, the crew faced competition from other crews. After the boat reached Alaska, the crew no longer faced competition from other crews. The captain's reliance on the contract caused him to forego the opportunity of contracting with another crew in California. Furthermore, the captain made investments in reliance on the contract, such as purchasing fuel and supplies. The absence of competition and the captain's reliance on the crew increased the crew's bargaining strength. So the crew tried to renegotiate the price.

Notice that this example fits our distinction between legal demands and illegal threats. If the parties failed to agree on the original contract, they would not cooperate together. By failing to cooperate, they would not create a surplus. Renegotiation is different. After making the contract, the captain relied by foregoing the opportunity to hire an alternative crew and outfitting the boat for the voyage to Alaska. In the renegotiations, the crew threatened to destroy the value of the captain's reliance. The destructive threat to breach a contract after reliance constitutes coercion in renegotiating the price. In general, courts do not enforce contract renegotiations motivated by the increase in the promisor's bargaining strength that results from the promisee's reliance.

**QUESTION 7.20:** Suppose that person A, while aiming a gun at person B, invites B to write a check. Explain the efficiency argument for allowing B to cancel the check later.

**QUESTION 7.21:** Suppose that a baseball star signs a five-year contract for $1 million per year. In the third year of the contract, the player hits more home runs than anyone else in the league. Now he demands to renegotiate his salary. Does efficiency require the law to enforce the original contract or set it aside?

**WEB NOTE 7.4**

The opinion in the case described above is available on our website with some additional questions.
2. *Necessity* The following example illustrates the next doctrine, called “necessity.” A surgeon runs out of gas on a lonely desert road. A passerby offers to sell the surgeon five liters of gas in exchange for a promise to pay $50,000. The surgeon makes the promise and uses the gas to escape from the desert, but later the surgeon refuses to pay $50,000. The surgeon asserts that “necessity” forced him to make the promise.

Like duress, necessity is a promise given under a dire constraint. As explained, *duress* concerns a dire constraint imposed on the promisor by the promisee. In contrast, necessity concerns a dire constraint imposed on the promisor by someone other than the promisee. The cause of the dire constraint could be the promisor, a third party, or bad luck. For example, the surgeon might run out of gas on a lonely desert road because he neglected to fill the tank, someone gave him false directions, or a rock punctured the fuel line.

In cases of duress and necessity, the promisee makes a destructive threat and the promisor responds by making a one-sided promise. The nature of the threat, however, differs for the two doctrines. With duress, the promisee threatens to destroy by *acting*. With necessity, the promisee threatens to destroy by *not* acting, specifically by not rescuing. For example, the passerby threatens to leave the surgeon stranded on a desert road unless he promises to pay $50,000 for five liters of gas.

In a Biblical parable, the “good Samaritan” saved the life of a man attacked by thieves and nursed him back to health, without expectation of reward. In the necessity cases, a “bad Samaritan” extracts the promise of an extravagant reward in exchange for a rescue. Rescue deserves an appropriate reward, not an extravagant reward. An appropriate award provides efficient incentives for rescue. Efficient incentives for rescue induce enough investment in rescue so that the cost equals the expected benefit. The expected benefit equals the probability of a rescue multiplied by its value.

To illustrate, return to the example of the surgeon who ran out of gas on a lonely desert road. The rescue cost the passerby at least five liters of gas, plus inconvenience and delay. In order to provide incentives for rescue, the rescuer should recover the cost of the rescue. In addition to costs, the rescuer should receive sufficient reward so that future rescuers will perform eagerly, not reluctantly.

We distinguish three kinds of rescues by their cost. First, a *fortuitous* rescue uses resources that were on hand by chance. For example, the passerby happens to have extra gas in her tank when she happens to encounter the stranded surgeon, so the passerby siphons five liters of gas from the tank of her car to the tank of the surgeon’s car. Second, an *anticipated* rescue uses resources set aside in case they are needed for a rescue. For example, the passerby always carries a 5-liter can of gas in the trunk of her car just in case she happens to encounter someone stranded. Third, a *planned* rescue occurs when the rescuer searches for people who need rescuing. For example, a professional rescuer patrolling the desert comes on the stranded surgeon.

The difference in costs affects the difference in rewards required to create incentives for the three kinds of rescue. Fortuitous rescue uses resources that just happen to be available. Incentives for fortuitous rescue require a modest reward to
compensate for resources actually consumed in the rescue. Anticipated rescue uses resources set aside for emergencies. Incentives for anticipated rescue require sufficient reward to compensate for preparations against emergencies. Preparations use more than the resources consumed in an actual rescue. Planned rescue uses resources invested in searching for people in distress. Incentives for planned rescue require sufficient reward to compensate for search. Searching uses more than the resources consumed in preparing for emergencies or rescuing. In general, incentives for planned rescues require larger rewards than for anticipated rescues, and incentives for anticipated rescues require larger rewards than for fortuitous rescues.

The reward should be adjusted by law to induce investment in rescue at the efficient level. When jeopardy is rare and its consequences are slight, investment in fortuitous rescue may be sufficient. For example, if people seldom run out of gas in the desert and the consequences are temporary discomfort, then a trivial reward may be sufficient. As probability and seriousness increase, efficiency may require anticipated or planned rescue. If people occasionally run out of gas in the desert and the consequences are serious, then an extra reward should be given to rescuers for carrying extra gas. Finally, if people often run out of gas in the desert and the consequences are life-threatening, then an even larger reward should be given to planned rescuers in order to induce them to form a “desert patrol.”

**QUESTION 7.22:** Explain why professional rescuers should typically receive a larger reward than anticipated rescuers, and anticipated rescuers should typically receive a larger reward than fortuitous rescuers.

**QUESTION 7.23:** A house catches on fire. The fire is extinguished by the combined efforts of (1) professional firefighters, (2) volunteer firefighters who help the professionals, and (3) passersby who spontaneously help the professionals and volunteers. The owner of the house makes various promises to induce the help of the three groups. Use economics to explain why a court should not enforce the promises, but the court should require the homeowner to pay (1) more than (2), and to pay (2) more than (3).

**QUESTION 7.24:** In *Post v. Jones*, 60 U.S. (19 How.) 150 (1857), the whaling ship *Richmond* ran aground on a barren coast in the Arctic Ocean and began to sink with a full cargo of whale oil. A few days later three other whaling ships came on the *Richmond*. The three captains, while agreeing to save the crew, threatened not to take any of the *Richmond*’s whale oil unless the captain of the *Richmond* agreed to an auction. One of the three captains bid $1 per barrel for as much as he could take; the other two took as much as they could hold at $0.75 per barrel. Both prices were well below the competitive price of whale oil. When the three vessels returned to port with the *Richmond*’s oil and

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27Free entry in the market for rescuing, like open-access fishing, has an incentive problem due to congestion, but this is a technical detail.
crew, the owners of the Richmond sued, asking the court not to enforce the sale of the whale oil at the low auction prices. Did the captains who purchased the oil make destructive threats? Should the court set aside the auction on efficiency grounds? What compensation should the rescuers receive? (Note: sea captains have a legal duty to rescue ships and cargo in distress.)

3. Impossibility

With duress and necessity, the dire constraint precedes the promise. Sometimes a dire constraint follows the promise and prevents performance. For example, a surgeon may promise to operate and then break her hand before the scheduled operation. Although the surgeon cannot perform, she can pay damages. If the surgeon cannot physically perform, the law can either excuse her or require her to pay damages. In general, when a contingency makes performance impossible, should the promisor be excused or held liable? The “impossibility doctrine,” which we analyze in this section, answers this question.

As discussed in the preceding chapter, perfect contracts contain terms that explicitly allocate all risks. Explicit allocation of risk requires costly negotiating. The cost of negotiating must be balanced against the benefit from explicit allocation of risk. On balance, the cost of negotiating over remote risks may exceed the benefit. Consequently, efficient contracts have gaps concerning remote risks.

Sometimes the explicit terms in the contract provide guidance to filling a gap. To illustrate, assume that a company promises to drill a well for a landowner, but the drill runs into impenetrable granite rock. If the contract remains silent about this contingency, the court must decide whether the driller owes damages to the landowner. If the price in the drilling contract exceeds competing offers, perhaps the driller implicitly guaranteed success to the landowner. If the driller gave an implicit guarantee, he should be held liable. Or perhaps the industry custom requires drillers to bear the cost of breach whenever the contract remains silent. If industry custom holds drillers liable, the court should apply the custom to the case.

In other instances, however, the terms of the contract and the custom of the industry provide no guidance to the allocation of risk. When the contract does not allocate the risk explicitly or implicitly to one of the parties, the law must do so. In contract law, the promisor is typically liable for breach, even though the breach was not his or her fault. In other words, contractual liability is strict. For example, a construction company is liable for late completion of a building, regardless of whether or not the construction company did its best to meet the deadline. Similarly, when the contract was silent about the contingency causing breach, the promisor is typically liable, even though the breach was not the promisor’s fault. In the typical case, the promisor is liable for breach caused by a remote contingency that was not mentioned in the contract.

In some circumstances, however, physical impossibility of performance excuses nonperformance.28 For example, the estate of a famous portrait painter is not

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liable if death prevents the artist from completing a contract to paint someone’s picture.29 Similarly, a manufacturer may be excused from fulfilling its contracts to deliver goods because lightning ignited a fire that destroyed her factory.30 The burning of the factory is an “act of God” or force majeur. Also, breach is excused if performance became illegal before it could occur. For example, a shipping company is excused from its contract to carry civilian cargo in time of war if the government commandeers its ships to carry military cargo.

These examples concern physical impossibility. In other cases, performance is physically possible and economically impossible.31 For example, the driller may be excused for not completing the well as promised to the landowner because the drill could only penetrate granite at ruinous cost.

What underlies and unifies these cases? According to a traditional legal theory, a contingency destroyed a “basic assumption on which the contract was made” in each case.32 For example, the contract with the portrait painter assumed that he would live, the contract with the factory assumed that it would not burn down, and the contract with the shipping company assumed that the government would not commandeer its ships. According to this theory, breach of a contract made in good faith is excused whenever events destroy one of its basic assumptions.

How do we decide whether an assumption is basic or dispensable? Economics can clarify this vague distinction or dispense with it. The impossibility doctrine concerns contingencies that make performance impossible. These contingencies represent a risk, much like the risk of pneumonia or an automobile accident. Economics has a theory of efficient risk-bearing. Efficiency requires allocating risk to the people who can bear it at least cost. If the impossibility doctrine in contract law were efficient, it would assign liability to the party who can bear the risk that performance becomes impossible at least cost.

Several factors determine who can bear risk at least cost. First, people can often take steps to decrease the probability that performance becomes impossible or to reduce the losses from breach. For example, an elderly and ailing painter might delay other work in order to complete a portrait as commissioned. The ship’s owner might alert the customer to the need for alternative supplies in the event that war causes the government to commandeer ships. The factory owner might install a sprinkler system to reduce the damage caused by fire. These considerations suggest that a risk should be assigned to the party who can take precautions to reduce it at least cost.

Second, even if no one can take precautions to reduce risk, someone can usually spread it. For example, assume that an earthquake prevents a seller from

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29Note that this exception, as in the example given, most typically involves the promise to provide personal services. The law, both common and statutory, has frequently been reluctant to compel performance of personal service contracts under any circumstances.


31Economic impossibility is called “impracticability” or “commercial impracticability.” Sometimes the defense concerns the absolute cost of performance, and sometimes the defense concerns the cost of performance relative to the promisor’s assets (e.g., performing bankrupts the promisor).

delivering goods on time. No one can prevent earthquakes, but people can insure against them. Insurance companies specialize in spreading risk. Even without insurance, an individual may be able to spread risk by other means. For example, the investors in a factory subject to an earthquake hazard can spread risk by purchasing stocks from companies in different locations (“portfolio diversification”). Risk is cheaper to bear when spread than when concentrated. These considerations suggest that risk should be assigned to the party who can spread it at least cost, by insurance or other means.

A person’s ability to reduce and spread risk determines his or her cost of bearing it. Efficiency requires allocating risk to the people who can bear it at least cost. Thus, efficiency requires interpreting the impossibility doctrine as follows: If a contingency makes performance impossible, assign liability to the party who could reduce or spread the risk at least cost.

The concept of “lowest-cost risk-bearer” provides a clear interpretation of the impossibility doctrine in many difficult cases. To see how, consider two versions of the example of the commandeered ship. In the first version, the shipping company has easier access to alternative transportation than does the owner of civilian goods. Consequently, the shipping company can bear the risk of its ship’s being commandeered at lower cost than the owner of civilian goods, so the shipping company should be held liable for breach of contract. In the second version, the owner of civilian goods has easier access to alternative transportation than does the shipping company. Consequently, the owner of civilian goods can bear the risk of commandeering at lower cost than can the shipping company, so the shipping company should be excused for breaching the contract. (To see the improvement made by economic analysis, try to distinguish these two versions of the case of the commandeered ship using the “basic assumption” theory.)

Similar analysis applies to the other examples. The portrait painter can bear the risk of breach at least cost if he can easily rearrange his schedule to paint commissioned pictures first, whereas the person who ordered the portrait can bear the risk of breach at least cost if he can easily obtain a portrait from another artist with equal talent. The factory owner can bear the risk of fire at least cost if she can easily purchase fire insurance whose coverage includes liability for not delivering goods, whereas the customer can bear the risk at least cost if he can easily obtain substitute goods from another factory.

Interpreting the impossibility doctrine to assign liability to the lowest-cost risk-bearer minimizes the cost of remote risks. Minimizing the cost of remote risks maximizes the surplus from the contract, which the parties can divide between them. Both parties stand to gain from the economic interpretation of the impossibility doctrine. We presume that, if the parties had explicitly allocated the risk, they would have assigned it to the party who can bear it at least cost. Thus, the economic principle can be defended as a rational reconstruction of the will of the parties.

**QUESTION 7.25:** Lightning is an “act of God.” Describe some of its incentive effects on people.

**QUESTION 7.26:** In the famous case of *Taylor v. Caldwell*, 3 B. & S. 826, 122 Eng. Rep. 309 (K.B. 1863), the plaintiff, Taylor, had
leased the defendant’s concert hall for four nights at 100 pounds sterling to be paid to Caldwell after each night’s performance. Shortly after the first performance, the concert hall was destroyed by fire. Taylor sued Caldwell for breach of contract and asked the court to award him as damages the expenses he had incurred in preparation for the last three performances. The defendant sought to be excused from performing on the ground that it was literally impossible for him to perform the contract after the fire.

a. What factors enable one party to prevent a risk better than another?
b. What factors enable one party to insure against a risk better than another?
c. Do these factors tend to converge or diverge, or is their association merely coincidental?
d. How would you decide this case in light of economic analysis?

**Question 7.27:** In the mid-1970s, the Westinghouse Corporation persuaded electric companies to purchase nuclear reactors, and Westinghouse agreed to supply purchasers with uranium at a fixed price of $8–10 per pound. By mid-1975 Westinghouse had commitments to supply 40,000 tons of uranium more than it held in inventory or forward contracts, at which time the market price of uranium had risen to more than $30 per pound. To cover its shortage, Westinghouse would have incurred losses of nearly $2 billion, which would have led to its bankruptcy. In September 1975, the company announced that it would not honor its contracts. It sought to be excused on the ground that performance was economically impossible (“commercial impracticability”). Most of the utilities sued Westinghouse. What considerations do you think should have been used by courts to determine whether Westinghouse was excused from supplying the uranium?33

**4. Frustration of Purpose** Having discussed a contingency that prevents performing, we now consider a contingency that destroys its purpose. A coronation parade was planned for June, 1902, in London. Many owners of property along the parade route leased rooms for the day to people wishing to observe the ceremony. When the king’s illness caused the parade to be postponed, many people refused to pay the rent, and some of the property owners sued to enforce the contracts. The courts held that the contracts were unenforceable because their purpose was destroyed by postponing the ceremony.34

As explained, the impossibility doctrine provides a default rule to allocate losses caused by remote contingencies that make performance impossible. Similarly, the frustration doctrine provides a default rule to allocate losses caused by

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33See Paul Joskow, *Commercial Impossibility, the Uranium Market, and the “Westinghouse” Case*, 6 J. LEGAL STUD. 119 (1976). All of the lawsuits were settled out of court.

34See, for example, *Krell v. Henry*, 2 K.B. 740 (1903).
contingencies that make performance pointless. Pointless performance does not serve the purpose that induced the parties to make the contract. For example, the scheduled coronation parade induced the parties to make a contract for viewing it. Efficiency requires allocating risk to the party who can bear it at least cost. Thus, efficiency requires interpreting the doctrine of frustration of purpose as follows: *If a contingency makes performance pointless, assign liability to the party who could bear the risk at least cost.*

As explained, a person’s ability to reduce and spread risk determines his or her cost of bearing it. Returning to our example, the property owners who rented rooms could completely eliminate their losses caused by postponement of the coronation parade by renting the rooms a second time for the rescheduled parade. Bearing the risk of postponement was probably costless to the owners. Alternatively, the people who rented the rooms to view the parade face the risk of having to pay the rent twice. Efficiency apparently requires allocating the risk of postponement to the property owners, not the renters of the rooms.

**QUESTION 7.28:** We divided the doctrines of contract law into default rules that fill gaps and regulations that restrict promises. Classify the following doctrines as default rules or regulations: incompetence, duress, necessity, impossibility, and frustration of purpose.

5. **Mutual Mistake About Facts** We discussed a contingency that materializes after the parties sign the contract and makes performance of a contract pointless. Another possibility is that the contingency materializes before the parties sign the contract, without them knowing it. To illustrate, assume that Buyer contracts to buy a tract of timber land from Seller. Both Seller and Buyer believe that the land has timber, but in fact a forest fire has destroyed it. The parties have made a mutual mistake about a fundamental fact concerning the object of sale.

In analyzing frustration of purpose, we proposed the following principle: *If a contingency makes performance pointless, assign liability to the party who could bear the risk at least cost.* The law should assign liability in such cases to the party who can take precaution to prevent the contingency at least cost, or to the party who can insure against the contingency at least cost. The same principle applies to a mutual mistake concerning a fundamental fact about the object of sale. To illustrate, if Seller can prevent forest fires or insure against them more cheaply than Buyer, then Seller should be unable to enforce the contract for timber against Buyer. The owner at the time of the accident is usually the cheapest avoider of it.

6. **Mutual Mistake About Identity** Now we turn from mutual mistakes about facts to mutual mistakes about identity. A mutual mistake about identity occurs when the buyer and seller have different objects in mind, so their “minds do not meet.” Recall the example of the rusty Chevy, in which the seller and buyer agreed to a price of $1000 for a car, but the seller intended to sell a rusty Chevy and the buyer intended to buy a shiny Cadillac. In the example, the buyer was mistaken about what the seller proposed to sell, and the seller was mistaken about what the buyer proposed to buy.
When the parties make a mutual mistake about identity, there is no true agreement to exchange. If the courts were to force an exchange, it would be involuntary. Involuntary exchange can destroy value rather than create it. Involuntary exchange destroys value by transferring ownership from someone who values the good more to someone who values it less. To illustrate, the buyer may value the shiny Cadillac at $2000, and the seller may value it at $2500. Forcing the Cadillac’s transfer of ownership destroys $500 (“negative surplus”). By setting aside contracts based on mutual mistake, courts preclude the destruction of value by involuntary exchange.

**QUESTION 7.29:** In *Raffles v. Wichelhaus*, 2 Hurl. & C. 906, 159 Eng. Rep. 375 (Ex. 1864), the plaintiff sold the defendants 125 bales of cotton to arrive “ex Peerless from Bombay,” that is, by way of the ship *Peerless* sailing from Bombay, India. A ship by that name sailed from India in December, but when it arrived, the defendants refused to take delivery of the cotton on the ground that they had meant a second ship named the *Peerless* that had left Bombay in October. The Court of Exchequer gave judgment for the defendants on the argument that there had been no meeting of the minds. How would you analyze this case?

**C. Information**

We have been discussing contract doctrines that allocate risk. Now we consider contract doctrines that allocate information. Doctrines that allocate information are different from doctrines that allocate other economic goods. The difference in doctrines is caused by a difference in the goods themselves. Information is discovered and transmitted, whereas most other goods are made and consumed. Unlike the makers of goods, the discoverers of information have difficulty appropriating its value, which creates a need for patents. Unlike consuming commodities, using information does not diminish the amount that remains for others. Consequently, information can be transmitted to many people without diminution. These facts make information different from most other goods. (Recall the discussion of public goods in the section on information economics in Chapter 5.)

What special problems exist in defining property rights and establishing markets in information? Everyone with a television or computer buys information, but information differs from other commodities like oranges or razor blades. Buyers cannot determine the value of information until they have it, and having it removes their willingness to pay for it. To illustrate, a banker recently received a letter that read, “If you pay me $1 million, I’ll tell you how your bank can make $2 million.” This letter illustrates a pervasive problem in computer software: Small companies often invent software that only large companies can market. To assess the value of the product, a large buyer like Microsoft must understand how it works. After learning how the product works, however, the large company may produce its own version of the product rather than paying royalties to the small company.

We will explain how contract doctrines contribute to the efficient discovery and transmission of information. Economists say that public information is known
to both parties in a bargain, whereas *private* information is known to one party and unknown to the other. Private information often motivates exchange. To illustrate, assume that someone knows how to get more production from a resource than does its owner. To increase production, knowledge must be united with control. To unite knowledge with control, the owner of the resource must acquire the information, or else the informed person must acquire ownership of the resource. In general, the transmission of information and the sale of goods unites knowledge and control over resources. *Efficiency requires uniting knowledge and control over resources at least cost, including the transaction costs of transmitting information and selling goods.*

The parties can usually solve the problem of private information through private bargaining. For example, the informed party may offer to buy the resource and pay more than the uninformed owner can earn from using it. Or the informed party may offer to share the information with the uninformed owner of the resource in exchange for a proportion of the resulting increase in profits. Private bargaining usually solves the problem of asymmetrical information much better than any alternative, such as having the state dictate a solution. Consequently, the law usually enforces contracts based on asymmetrical information.

Instead of uniting knowledge and control, however, some contracts separate them. Separating knowledge and control reduces efficiency in the use of resources. Contracts that separate knowledge and control should be suppressed for the sake of efficiency. In subsequent sections, we will discuss three such doctrines: mistake, failure to disclose, and fraud.

**1. Unilateral Mistake** Each of the parties to a bargain usually knows something that the other does not know. Sometimes one of the parties knows that the other party has a mistaken belief. For example, the seller of a car may think that it is merely old, whereas the buyer may know that it is a classic. Although the seller was mistaken about the car’s value, the buyer was not, so mistake is unilateral. When one party to a bargain knows the truth and the other party does not, the exchange is based on a “unilateral mistake,” according to the language of the law. Courts usually enforce contracts based on unilateral mistakes. For example, if the owner promises to sell a classic car for less than its market value, the law will usually enforce the promise.

When the buyer acquires the classic car in this example, knowledge and control are united, which typically increases efficiency. For example, the buyer will probably take better care of the car because he or she knows its worth. The contract also increases efficiency in another way. Discovering information often requires investing time and resources, which requires a reward. In this example, the buyer may have searched long and hard to find a seller who does not know that he or she owns a classic car. The profit from buying the classic car at a low price rewards the buyer for the search.

We explained above that a mutual mistake about facts or identity is a valid formation defense in common law, whereas unilateral mistake is not. Consequently, a party who seeks performance of a contract may say that mistake was
unilateral, and a party who seeks release from a contract may say that mistake was mutual. Economic efficiency provides a criterion for making this distinction. Mutual mistake converts a contract into an involuntary exchange, which can destroy value. In contrast, a contract based on a unilateral mistake usually promotes efficiency by rewarding discovery and uniting knowledge with control. We propose the following principle to improve the legal distinction underlying the doctrines of unilateral and mutual mistake: Withhold enforcement from contracts involving involuntary exchange, and enforce contracts that reward discovery and unite knowledge with control.

We apply this principle to the famous case of Laidlaw v. Organ, 15 U.S. (2 Wheat.) 178 (1815). During the War of 1812 between Britain and the United States, the British blockaded New Orleans, which depressed the price of export goods like tobacco. Organ, a buyer of tobacco, received private information that the war had ended by treaty, so he called on a representative of the Laidlaw firm and offered to buy tobacco. The representative of the Laidlaw firm was ignorant about the peace treaty, so a contract was concluded between them at the depressed price. The next day public notice was given in New Orleans that peace was concluded, and the price of tobacco soared. The mistake in this contract was obviously unilateral, not mutual—Organ knew about the treaty, and Laidlaw did not. Even so, the contract was apparently set aside by the court after a trial.

This outcome can be defended on economic grounds. According to the preceding principle, the contract should be enforced if doing so rewards discovery and unites knowledge with control. The evidence suggests that Organ discovered fortuitously that peace was concluded, rather than investing time and resources in making the discovery. Furthermore, the contract merely accelerated by one day the uniting of knowledge and control, which did not contribute to production of tobacco. So enforcing the contract would probably not increase efficiency.

To sharpen this analysis, distinguish between productive information and redistributive information. Productive information can be used to produce more wealth. It is information that allows existing resources to be moved to more productive uses (such as information that farmland contains valuable mineral resources) or discovers new methods of organizing resources for more productive uses (such as double-entry bookkeeping methods). The discovery of a vaccine for polio and the discovery of a water route between Europe and China were productive. Efficiency demands

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35We are drawing attention here to the evidentiary problem of determining what the parties truly believed at the time the contract was formed. It is possible that there is credible contemporaneous evidence about those beliefs. However, in the absence of that evidence the parties have adverse incentives to recount their beliefs. The party for whom the terms seem to be favorable has an incentive to contend that he or she was not mistaken about the terms of the contract and that if there was a mistake it was made by the other party; the party for whom the terms are unfavorable has an incentive to assert that there was a mutual misunderstanding.

36A verdict at trial for the buyer was appealed to the U.S. Supreme Court, which remanded it for retrial, but it is not entirely clear what happened on retrial. See Anthony T. Kronman, Mistake, Disclosure, Information and the Law of Contracts, 7 J. LEGAL STUD. 1 (1978).
giving people strong incentives to discover productive facts. Transmitting information is so easy that the person who discovers productive information seldom captures its full value. Consequently, the state must take special measures to reward people who discover productive information. For example, the state must subsidize basic scientific research and provide patents to inventors.

In contrast, redistributive information creates a bargaining advantage that can be used to redistribute wealth in favor of the informed party. To illustrate, knowing before anyone else where the state will locate a new highway conveys a powerful advantage in real-estate markets. Investment in discovering redistributive information wastes resources. In addition, investment in redistributive information induces defensive expenditures by people trying not to lose their wealth to better-informed people. Defensive expenditures prevent redistribution, rather than produce something. Thus, investment in redistributive information wastes resources directly and indirectly.

The state should not create incentives to discover redistributive information. Instead, the state should discourage investment in discovering redistributive information. For example, the state should punish officials who leak information about the location of a new highway prior to the public announcement. Such leaks encourage real-estate dealers to devote resources to gaining privileged information from officials.

To further sharpen this complicated issue, let us also distinguish the methods by which people acquire information. One can acquire information either actively—that is, by investing resources in the acquisition of information—or fortuitously—that is, by chance. As we argued at some length in Chapter 5, there is a strong social interest in encouraging the investment of resources in acquiring valuable information. That, recall, is the premise upon which intellectual property law rests. Fortuity is different, and there is nothing that society gains from more or less chance occurrences.

We can bring together our concerns about the nature of the information—whether it is productive or redistributive—and about the method by which it was acquired—whether by active investment of fortuity—in order to make a proposal about encouraging the efficient exchange and use of information in contracts. Consider the two-by-two chart shown in Table 7.2.

<table>
<thead>
<tr>
<th>NATURE OF THE INFORMATION</th>
<th>METHOD BY WHICH THE INFORMATION WAS ACQUIRED</th>
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<tr>
<td>Productive</td>
<td>Acquired by investment</td>
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<tr>
<td></td>
<td>Acquired by fortuity</td>
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<tr>
<td>Redistributive</td>
<td>Enforcement</td>
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<td>No enforcement</td>
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<td>No enforcement</td>
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</tbody>
</table>
Note that the only combination of the nature of the information and the method by which it was acquired for which there is a strong efficiency argument for enforcement is the one in the upper left-hand corner of Table 7.2—productive information that is the result of an active investment of resources. There is no efficiency case to be made for enforcing any of the other combinations in the chart. Indeed, we can go further than that and say that there is probably an argument to be made in favor of actively discouraging the investment of resources in acquiring redistributive information, such as investing in eavesdropping or establishing personal connections with powerful people so as to be the first to discover the route of the new major highway.

These considerations prompt another formulation of the economic principle for improving the legal distinction underlying the doctrines of unilateral and mutual mistake: Contracts based upon one party’s knowledge of productive information—especially if that knowledge was the result of active investment—should be enforced, whereas contracts based upon one party’s knowledge of purely redistributive information or fortuitously acquired information should not be enforced. This principle rewards investment in discovering productive information and discourages investment in discovering redistributive information.37

In our discussion of information economics in Chapter 5, we explained that most information is both productive and redistributive, what we might call “mixed” information. To illustrate, the invention of the cotton gin in 1792 by Eli Whitney increased cotton production and promoted speculation in land suitable for growing cotton. The example of the informed buyer who purchased a classic car from an uninformed seller also illustrates mixed information, that is, information that is both productive and redistributive. The information was productive because the informed buyer knew that the car deserved special care. The information was redistributive because the informed buyer’s gain from buying the car probably exceeded the increase in value from taking special care of it. We argued that private bargains usually succeed in rewarding discovery and uniting knowledge with control. Consequently, most bargains based upon differences in information affecting production and distribution should be enforced. In other words, most bargains based upon mixed information should be enforced.

We have arrived at three economic principles to govern the analysis of contract cases in which the formation defense of mistake is raised:

1. enforce contracts based on differences in productive information, especially if that information was acquired by investment;
2. enforce most contracts based on difference in mixed information (productive and redistributive); and

37 In his article cited in the previous footnote, Professor Kronman asserts that the contract between Organ and Laidlaw should have been set aside because the facts known to Organ were acquired fortuitously, rather than through deliberate investment. This is an important distinction because it raises an additional level of analysis in mistake cases. Thus, the deliberate acquisition of productive information is clearly to be protected. And, just as clearly, the deliberate acquisition of redistributive information is to be discouraged. But the fortuitous acquisition of productive information is not so firmly to be protected; nor is the fortuitous acquisition of redistributive information so firmly to be discouraged.
3. set aside contracts based on differences in purely redistributive in-
formation or if the information was acquired fortuitously.

These normative principles clarify the principle underlying the legal doctrines of mutual and unilateral mistake.

**QUESTION 7.30:** Consider the case of *Laidlaw v. Organ*. List the ways in which Organ's information might be productive. Explain how Organ's information might be redistributive. What do you conclude about whether or not efficiency requires enforcing the contract?

**QUESTION 7.31:** A large number of cases involve a dispute about whether a mistake was mutual or unilateral concerning the quality of the object or its value. In a famous case, *Sherwood v. Walker*, 66 Mich. 568, 33 N.W. 919 (Mich. 1887), the seller (Walker) promised to deliver a cow to the buyer (Sherwood). The seller, who apparently believed that the cow was incapable of becoming pregnant, learned before the delivery was to take place that the cow was pregnant. A pregnant cow is far more valuable than a barren cow. The seller refused to deliver the cow to the buyer as promised. He contended that the contract was premised on the mutual mistake that the cow was barren. The buyer denied that he had made such a mistake.

a. The knowledge that a cow is fertile, rather than barren, is productive, rather than merely redistributive. Why?

b. Suppose the law imposed on Sherwood (the plaintiff-buyer) the duty to disclose to Walker (the defendant-seller) any evidence that the cow is fertile. Would there be an objection to such a duty on efficiency grounds?

c. Should it matter in this case that Walker was a professional cattle rancher and that Sherwood was a banker?

2. The Duty to Disclose

In the preceding section, we discussed productive and redistributive information. Now we consider another kind of information. Safety information helps people to avoid harm. For example, the safety information on an electrical appliance helps consumers to avoid fires. Conversely, the absence of safety information increases the probability and magnitude of accidents.

The law treats safety information differently from productive and redistributive information. As explained, contracts are often motivated by a difference in information between the parties. The law does not generally require an informed person to disclose productive or redistributive information to uninformed people. However, the law typically requires informed people to disclose safety information to uninformed people. For example, manufacturers must provide safety information concerning their products or assume liability when accidents occur. Regulatory law imposes most duties to disclose safety information. In this section we discuss the duty to disclose imposed by contract law.

The case of *Obde v. Schlemeyer*, 56 Wash.2d 449, 353 P.2d 672 (1960), provides an example of the common law duty to disclose. In this case, the seller of a
building knew that it was infested with termites. The seller deliberately withheld the information about the termites from the buyer. The seller did not lie to the buyer, who never inquired about termites. Not long after the sale, the buyer discovered the termite infestation and sued the seller.38

To minimize termite damages, the termites should have been exterminated as soon as they were discovered. By not disclosing the infestation, the seller gave the termites the opportunity to cause further destruction. The court in the *Obde* case departed from tradition and imposed a duty to disclose.39 By enforcing a duty to disclose, the court avoided future harms caused by the failure to disclose safety information, and the court diminished the need for future buyers to be wary or to undertake defensive expenditures against this sort of concealment by sellers.

The seller knew about the termite infestation, and the buyer did not know about it. Thus, the sale of the termite-infested house *separates* knowledge from control. A contract separates knowledge from control when the seller fails to disclose information needed by the buyer to prevent the good’s destruction. Earlier we explained that contract law seeks to *unite* knowledge and control. Thus, contracts based on the failure to disclose safety information undermine one purpose of contract law. These considerations suggest a fourth economic principle for contract cases involving information: *When bargaining to a contract, the parties should divulge safety information.*

**QUESTION 7.32:** Suppose that a seller has not bothered to investigate whether her house has termites, so she does not know. When asked by a buyer if it does, she says, “I guess not.” On efficiency grounds, should this statement be enough to void the contract?

**QUESTION 7.33:** Professor Schmidt, a geologist, has agreed to purchase McDonald’s farm for a price of $2,000 per acre, which corresponds to the price of good quality farmland in the vicinity. However, Schmidt, on the basis of his own geological studies, is convinced that McDonald’s farm contains valuable mineral deposits, which make the property worth $25,000 per acre. Schmidt’s true motive is discovered by McDonald before Schmidt takes possession, and McDonald refuses to hand over the property. Schmidt sues for breach of contract. McDonald defends on the ground that Schmidt had a duty to disclose the results of his studies. According to our economic principles, who should win?

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38In the case, the buyer asked not for invalidation of the contract but rather for damages for the costs that correcting the termite infestation imposed on him.

39The common law tradition held that sellers had no duty to disclose. The old rule was *caveat emptor*, “Let the buyer beware!” Sellers did, however, have the duty not to lie. See the discussion of fraud in the next section. Note that regulations in many parts of the United States now require the seller of real estate to provide the buyer with a certificate from a licensed exterminator that the house is free of termite infestation.
3. Fraud and Misrepresentation  The seller in Obde v. Schlemeyer failed to disclose safety information, but he did not claim that the property was free from termites. If the seller in Obde had actually claimed that the property was free from termites, the claim would have been fraudulent. Fraud at common law requires a lie—a false assertion made with the intention to deceive. Under the traditional common law doctrine, the victim of fraud is entitled to damages for harm caused by fraud.

The economic reason for not enforcing a promise elicited by fraud is straightforward. If parties to a contract know that fraud is a ground for voiding the agreement, then they can rely on the truthfulness of the information developed in negotiations for the contract. This saves the parties the costs of verifying material statements. This, in turn, lowers the costs of concluding cooperative agreements—furthering one of the economic goals of contract law.

Many misleading statements lie between fraud and nondisclosure, and these cases cause the most disputes. Courts and legislatures in the United States have recently broadened the circumstances in which a contract may be voided for nondisclosure. For example, lenders are now required by law to divulge the annual percentage rate of interest on all consumer loans. Used-car dealers are required in many states to reveal any major repairs done to their cars. Sellers of homes in most states are required to reveal latent defects, such as a cracked foundation. Producers of food are required to list ingredients. Manufacturers of some appliances must notify consumers about the appliance’s energy use. Like the traditional common law rules on fraud, these regulations aim to improve the exchange of information in private contracts. Enforcing these regulations can be costly. Consequently, legislation directed at a real abuse can end up costing consumers more than the harm they suffer in the absence of regulation.

QUESTION 7.34: Suppose that the seller is very attached to her home and wishes to sell only to someone who will maintain the property as a single-family dwelling. A prospective buyer says that he, too, wants to use the property as a single-family dwelling. The sale is completed, and the seller moves out. However, several days later, she learns that the buyer intended all along to demolish the house in order to open a commercial establishment. Does efficiency commend enforcing the contract or rescinding it?

D. Monopoly

We discussed dire constraints that leave the promisor with no choice. A less extreme situation occurs when a monopolist controls a product valued by many people. Strictly defined, a monopolist is the only seller of a product for which no close substitutes exist. A monopolist can dictate the price and nonprice terms of the contract offered to many buyers. The buyer must respond by accepting the monopolist’s offer or doing without the good.

Monopoly contrasts with its polar opposite, perfect competition, in which many buyers and sellers substitute perfectly for each other. In perfect competition, no one can dictate the price or nonprice terms of contracts. No one has power over the contractual terms because each buyer or seller who dislikes a contractual
partner can get an alternative contract from someone else. Perfect competition shades into monopoly as the availability of substitutes decreases.

Monopolists set prices too high, which distorts the economy. A price is too high when it exceeds the marginal cost of producing the good. When price exceeds marginal cost, some consumers, who would be willing to pay more for it than its cost of production, do not purchase the good. If producing a good costs less than people would be willing to pay for it, then not supplying the good is inefficient (“allocative inefficiency”). In addition to high prices, monopoly depletes the drive and dynamism of entrepreneurs (“dynamic inefficiency”). Consequently, economists condemn monopoly as inefficient.

Lawyers often condemn monopoly as unfair. In monopoly, the seller faces many potential buyers, whereas the buyers face only one potential seller. This asymmetry between seller and buyer constitutes the unfairness of monopoly. The law, consequently, looks on monopoly contracts with skepticism. Earlier we explained that a dire constraint can provide a defense or excuse for breaking a promise. Now we discuss whether monopoly provides a defense or excuse for breaking a promise.

Under the bargain theory, the courts enforce bargained promises and do not ask if the terms are fair. Consequently, the common law historically contains weak protection against monopolies. Most protections against monopolies come from statutes, not common law. Similarly, the “mercantilist” tradition in continental Europe favors monopolies protected by the state. The civil codes of Europe originally provided little protection against monopolies. To illustrate, companies often wish to keep prices high by promising not to compete with each other. Agreements not to compete enable cartels to extract monopoly prices from buyers. The courts in England and America were reluctant to enforce 19th-century contracts to create cartels. However, the common law did nothing beyond not enforcing cartel contracts to undermine cartels. Cartels were finally outlawed by antitrust statutes, not common law.

Besides contracts to create cartels, two common law doctrines sometimes lead courts not to enforce monopoly contracts. We will explain and critique two doctrines that provide performance excuses for monopoly contracts. For these doctrines, the healthy skepticism of courts concerning monopoly combines with confusion about the underlying economics.

**QUESTION 7.35:** Explain the relationship between the availability of substitutes and the elasticity of demand for a good.

**QUESTION 7.36:** I want to build a garage in my backyard. My neighbor’s driveway offers the only practical way to reach the proposed garage. I offer to purchase an easement from my neighbor, thus giving me the right to share her driveway. Economists describe the relationship between my neighbor and me as “bilateral monopoly.” Explain why this phrase is appropriate.

1. **Fill in a Form: Contracts of Adhesion** Most written contracts use standard forms. Some terms in a standard-form contract are fixed; others may be variable. For example, the legal staff of an automobile manufacturer may provide its salespersons
with form contracts that stipulate the warranty (fixed terms) and leave the price open for negotiation (variable term). Some standard forms do not allow the parties to vary any terms. In an extreme situation, one party makes a take-it-or-leave-it offer, meaning that the other party must sign the standard form or not make a contract.

Many fixed terms in standard-form contracts are uniform throughout an industry. For example, many automobile manufacturers promise to repair certain problems with their new cars within the first five years or 50,000 miles of the car’s life. When terms are uniform, sellers do not compete over them. Narrowing the scope of competition can reduce its intensity.

To see why, consider cartels. The members of a cartel agree to keep prices up, which profits the members as a group. Each individual member, however, profits even more by undercutting the cartel’s price and luring buyers away from other members. To prevent such “cheating,” the cartel must punish members who undercut the cartel’s price. Uniform, fixed terms in contracts prevent sellers from offering special concessions to buyers. Consequently, the cartel can focus on determining whether all members charge the cartel’s price. Monitoring “cheating” in the cartel is much easier when all sellers use the same contract with fixed terms.

In an influential article, Friedrich Kessler called take-it-or-leave-it agreements “contracts of adhesion.” (Friedrich Kessler, Contracts of Adhesion: Some Thoughts About Freedom of Contract, 43 COLUM. L. REV. 629 (1943).) This term suggests that standard-form contracts indicate the existence of a monopoly, which deprives buyers of bargaining power. Consequently, courts sometimes use “contract of adhesion” as a term of opprobrium to undermine the enforceability of a contract.

This court practice can be justified when sellers use standard-form contracts to reduce competition. However, this court practice is unjustified when sellers use standard-form contracts to increase the efficiency of exchange. Standard-form contracts narrow the scope of bargaining, which can promote efficiency in two ways. First, standard-form contracts can promote price competition by reducing product differentiation. To see why, consider an analogy. Toothpaste comes in different sizes, shapes, colors, textures, tastes, and smells. Manufacturers tinker with these differences in an attempt to attract customers by differentiating their product. Product differentiation complicates price comparisons. Price competition would be more intense if all toothpaste were the same. Similarly, uniformity reduces differences among contracts and intensifies the competition over price.

Second, standard-form contracts reduce transaction costs. The parties can bargain over variable terms, such as the price, and the parties cannot bargain over fixed terms. Thus, standard forms reduce the number of terms requiring drafting, bargaining, and agreement. One of the standard assumptions of a perfectly competitive market is that transaction costs are zero. Standard-form contracts can move a market closer to the perfectly competitive ideal by reducing transaction costs.

The availability of substitutes in perfectly competitive markets prevents anyone from bargaining over price. Similarly, the availability of substitutes in perfectly competitive markets prevents anyone from bargaining over nonprice terms in contracts. In general, substitutes turn everyone into “takers” of the price, and nonprice terms of contracts deflect people away from bargaining. The fact that many firms use
the same standard form may indicate a high level of competition among them. Take-it-or-leave-it contracts can indicate perfect competition rather than monopoly.

Because standard-form contracts can increase competition and efficiency in exchange, the phrase “contract of adhesion” should not be applied to standard-form contracts. Rather, the phrase should be reserved for monopoly contracts. The relevant question is whether a market is competitive or monopolistic. The fact that a contract was made on a standard form does not establish a presumption in either direction.

What should courts do with the terms in monopoly contracts? In monopoly contracts, the price is too high. Courts, however, usually do not think that adjusting the prices in a contract is their job. Courts are more willing to adjust the non-price terms. Should they?

To answer this question, we first ask whether the non-price terms of monopoly contracts are efficient or inefficient. The abstract answer given by economic theory is simple. The non-price terms of a contract typically create incentives that affect the size of the surplus from exchange, and efficient non-price terms maximize the surplus from exchange. In contrast, the price terms typically distribute the surplus between the parties. Sometimes the monopolist can use its power to extract the entire surplus from each exchange. A monopolist with this power will maximize its profits by maximizing the surplus from each exchange. In brief, a monopolist who can extract all of the surplus from each exchange by controlling the price will choose efficient non-price terms.

In contrast, a monopolist who cannot extract all of the surplus from exchange by controlling the price may adopt inefficient non-price terms in order to increase its control over the price terms. (These propositions can be restated in familiar jargon for economists.) For example, a monopoly supplier of software may increase its power to over-price by contracts that prohibit resale.

**QUESTION 7.37:** Explain how uniformity can reduce price competition by strengthening cartels or increase price competition by reducing product differentiation.

**QUESTION 7.38:** Competition drives prices down to costs, whereas monopolies price above cost. California banks have paid large damages for allegedly charging fees greater than the cost of certain services that they provide. Suppose a car manufacturer charges an additional $450 for an automatic transmission in a new car. What inefficiencies would result if the consumer could sue the manufacturer and make the company

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40 In economic jargon, a perfectly discriminating monopolist sets efficient non-price terms in its contract. Otherwise a monopolist may use inefficient non-price terms to increase price discrimination. To illustrate the latter, assume that buyers who are willing to pay a lot for a product also prefer a strong warranty, whereas buyers who are willing to pay a little prefer a weak warranty. Recognizing this fact, the monopolist might offer two contracts: a high-price-strong-warranty contract and a low-price-weak-warranty contract. The difference in warranties helps to separate the two consumer groups so the monopolist can charge them different prices. Without the two non-price terms, the monopolist cannot tell the two groups apart.
prove that $450 is not disproportionately above the actual cost of the automatic transmission?

**QUESTION 7.39:** Monopoly distorts contracts by making prices too high. Why would a monopolist ever want to distort the nonprice term by, say, limiting liability for harm caused by defective products?

**QUESTION 7.40:** Assume that two kinds of buyers purchase contracts from a monopolist who promises to deliver goods in the future. One kind of buyer values the good more highly than the other. The monopolist would like to charge a higher price to the buyers who value the good more highly, but he cannot identify who they are. To overcome this problem, he offers two different contracts. One contract charges a high price and offers to pay high damages in the event that the seller fails to deliver the goods. The other contract charges a low price and offers to pay low damages in the event that the seller fails to deliver the goods. Explain why the two kinds of buyers might prefer different contracts. Explain why the monopolist might gain from offering two kinds of contracts. (In economic jargon, the “menu” of contracts “separates” the “pool” of buyers and permits “price discrimination.”)

2. **Unconscionability** When a contract seems so one-sided that its enforcement would violate the conscience of the court, it may be set aside according to the common law doctrine of *unconscionability*. The civil law tradition contains a concept similar to unconscionability. “Lesion” refers to a contract that is too unequal to enforce in civil law. It is easy to see why judges do not want to use their power to enforce unconscionable contracts. It is difficult, however, to create legal doctrine about what shocks, or ought to shock, the conscience of a judge. We will use economics to dispel some of the obscurity in the unconscionability doctrine.

Lacking generally accepted definitions, the analysis of unconscionability must proceed from cases. We briefly discuss the famous case of *Williams v. Walker-Thomas Furniture Co.*, 350 F.2d 445 (D.C. Cir. 1965), to show how economics can contradict common sense. *Williams* concerns the purchase of a durable good from a retailer on credit. When a retailer loans the money for a consumer to

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41 Both the Uniform Commercial Code and the Restatement (Second) of Contracts have attempted definitions of unconscionability, but neither is precise. Here is what they say: 

**UNIFORM COMMERCIAL CODE, §2–302 comment 1 (1977):** “The basic test [of unconscionability] is whether . . . the clauses involved [in the contract] are so one-sided as to be unconscionable under the circumstances existing at the time of the making of the contract . . . The principle is one of the prevention of oppression and unfair surprise . . .”

**RESTATEMENT (SECOND) OF CONTRACTS, §208 (1979):** “c. Overall imbalance. Inadequacy of consideration does not of itself invalidate a bargain, but gross disparity in the values exchanged may be an important factor in a determination that a contract is unconscionable . . . Such a disparity may also corroborate indications of defects in the bargaining process. . . . gross inequality of bargaining power, together with terms unreasonably favorable to the stronger party, may confirm indications that the transaction involved elements of deception or compulsion, or may show that the weaker party had no meaningful choice, nor real alternative, and hence did not in fact assent or appear to assent to the unfair terms.”
buy a good, the lender-retailer wants a guarantee of repayment. The borrower offers something valuable that he or she owns (collateral). The lender acquires a right to the valuable object through what is known as a “security interest.” If the borrower defaults on the loan, the lender can take possession of the valuable object, sell it, and use the proceeds of the sale to discharge the debt.42

In theory, the borrower can offer anything valuable as a guarantee, but in practice the borrower usually offers the item that he or she is buying with the borrowed money, such as a refrigerator or an automobile. The lender-retailer obviously knows the market for that item and can easily resell it. However, consumer durables typically lose value faster than the purchase price is paid off. Consequently, the right to repossess the item being purchased will not fully protect the lender-retailer from loss due to default by the borrower. For example, assume that a car dealer lends $20,000 to a consumer to buy a new car. The instant the car leaves the dealership, it becomes a “used car” and falls in value to, say, $16,000. If the consumer-borrower defaults on the $20,000 loan, the most that the dealer can recover by repossessing the car and reselling it is $16,000. Consequently, consumer-borrowers need additional guarantees in order to borrow money to purchase consumer durables. The best alternative is a cash payment, called a “down payment,” equal to the difference between the purchase price and the amount of the loan. But what about the consumer who does not have the cash to make a down payment? That problem can be solved by an “add-on clause,” which specifies that any goods that the borrower has previously purchased on credit from the lender-retailer will serve as additional security for the current purchase.

To illustrate, assume that A bought a refrigerator from B’s store two years ago for $800. A borrowed $600 from B to make the purchase, and A promised to repay the loan at $10 per month for five years. A has made payments each month for the past two years and still owes $360 on the refrigerator. Now A decides to purchase a television set for $500. A does not have the cash for a down payment. Instead, B suggests an add-on clause, by which A offers the refrigerator and the television as a guarantee. Thus, if A should default on the payments for the television, B may repossess the television and the refrigerator to discharge A’s debt on the television.43

The Williams case involved such an add-on clause. Mrs. Williams was a single mother of seven children and had a limited education. When she missed several payments on the most recently purchased goods, the Walker-Thomas Furniture

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42 Most jurisdictions have statutes that limit the repossession to recovering the debt and the cost of collection. See Alan Schwartz, The Enforceability of Security Interests in Consumer Goods, 26 J. LAW & ECON. 117 (1983).

43 Recall that B cannot realize a profit on this repossession. Of the proceeds from the resale of the repossessed items, B may only keep the amount of the loan to which the store is entitled. Anything more than that which comes from the resale must be turned over to A.

There is more to the add-on clause. It also provides, typically, that the lender may use discretion in applying each installment payment made with respect to any item purchased from the lender-retailer against whatever outstanding balance the lender-retailer chooses. This may allow the creditor to keep the security interest in the refrigerator alive after the five years for which the original loan was to run. By adroit accounting, the creditor can keep this security interest in all previously purchased goods until all the loans have been paid off.
Company laid claim to most of the household goods she had purchased from it under 14 contracts over a five-year period. In such individual cases, the consumer’s situation is desperate, and the impulse to provide legal relief is powerful. The Williams court held the add-on clause to be unconscionable. To make this showing, we shall need to explain some economics of consumer-credit transactions.

Lawyers focus on individual cases, whereas economists focus on statistics. Statistically, the paternalistic protection of Mrs. Williams by legal restrictions on the credit market imposes high costs on poor consumers as a class.\(^{44}\) The add-on clause presumably represents the cheapest way for some poor consumers to obtain credit. Denying them this instrument for borrowing will either force them to borrow at higher costs, or prevent them from borrowing to purchase needed goods. The poor as a class will borrow at higher cost and purchase fewer consumer goods than they otherwise would. Those retailers who offered the add-on clause in an attempt to lower the costs of consumer credit may also be made worse off by the holding. Their sales may decline or their costs may rise; in either case their profits are likely to fall.

We have suggested that Mrs. Williams deserved protection as an individual, and that refusing to enforce add-on clauses harms poor consumers as a class. The courts need a finer analysis to distinguish between consumers who need paternalistic protection and those whom it harms. Some consumers do not understand the complexities of the add-on clause. Perhaps they think that if they fail to make their payments on the most recent purchase, the lender-retailer will repossess only their most recent purchase. Such people undertake an additional loan without fully appreciating the risks and consequences of default. In cases like Williams, the court might require proof that the buyer understood the add-on clause as a condition for enforcing it. The courts would require the contractual process to contain protections against ignorance about add-on clauses. The unconscionability doctrine might protect people from their own ignorance, but otherwise let them make their own decisions.

Courts frequently distinguish between substantive and procedural unconscionability. Substantive unconscionability usually refers to a price that is utterly disproportionate to market value. In contrast, procedural unconscionability consists of circumstances and procedures present at the formation of the bargain that violate widely accepted norms of fairness. Substantive and procedural unconscionability are often combined in actual cases because an unfair procedure frequently results in an unfair price. Violation of these norms undermines the quality of consent to the contract.

**Question 7.41:** A 21-year-old songwriter signed a contract in 1966 with a music publisher. The standard-form contract assigned the copyrights of all the plaintiff’s output to the defendant company in return for the defendant’s agreement to pay 50% of the net royalties to the plaintiff. The contract was to run for five years, with automatic renewal for another five years if the plaintiff’s royalties during the first term exceeded 5000 pounds sterling. The defendant company could terminate the contract on one month’s notice and could assign the contract and

any copyrights held under it without the plaintiff’s consent. For signing the contract, the plaintiff received 50 pounds as an advance against future royalties. The plaintiff became a successful songwriter and sought to be released from the contract on the ground that it was unconscionably one-sided in the music publisher’s favor. Macaulay v. Schroeder Publishing Co. Ltd., (1974) 1 W.L.R. 1308 (H.L.). Use economics to analyze this case.

WEB NOTE 7.5

There is much more to be said about the troubling and troubled subject of unconscionability. We discuss some additional literature and cases involving that doctrine and pose additional questions about them on our website.

WEB NOTE 7.6

There is an increasing amount of interesting empirical work on contract law. We discuss that literature—especially that on unfair contract terms in new car deals by Professor Ian Ayres of Yale and a summary of that literature by Professor Russell Korobkin of UCLA—on our website.

Conclusion to Part II

We summarize our analysis of excuses and defenses. The doctrine of incompetence is triggered when an incompetent person makes a promise. The law provides incentives to protect incompetent people at least cost by interpreting contracts in their best interests. The doctrine of duress gets triggered when the promisor threatens destruction in order to induce the promisee to make a one-sided promise. The law creates incentives to deter threats by not enforcing coerced promises. The doctrine of necessity gets triggered when the promisor threatens not to rescue the promisee in order to induce a one-sided promise. The law creates incentives for efficient rescue by requiring the beneficiary to pay the rescuer the cost of rescue plus a reward, and by refusing to enforce the one-sided promise. The doctrine of impossibility gets triggered when a contingency prevents performance. The law encourages efficient precaution and risk-spreading by allocating liability to the party who can bear the risk of the contingency at the least cost.

A contract can separate information and control when both of the parties make a mistake, or when the seller fails to disclose information needed by the buyer to prevent the good’s destruction, or when the promisee supplies false information to the promisor.

Turning to monopoly, standard-form contracts can be used to promote collusion in a cartel. The law should not enforce such “contracts of adhesion.” More typically, standard-form contracts increase competition by reducing product differentiation and lowering transaction costs. Finally, “unconscionability” covers a
confusing array of doctrines, including bargaining processes that leave consumers ignorant of important terms. If events trigger these terms, the consumers are “unfairly surprised.” The remedy is to require a process that communicates the information as a condition of enforceability. Table 7.3 encapsulates our analysis.

Table 7.3

Defenses and Excuses

<table>
<thead>
<tr>
<th>LEGAL DOCTRINE</th>
<th>FACT TRIGGERING</th>
<th>INCENTIVE</th>
<th>LEGAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>incompetence</td>
<td>incompetent person makes promise</td>
<td>protect incompetents at least cost</td>
<td>interpret contract in incompetent’s best interests</td>
</tr>
<tr>
<td>duress</td>
<td>promisee threatens to destroy</td>
<td>deter threats</td>
<td>no enforcement of coerced promises</td>
</tr>
<tr>
<td>necessity</td>
<td>promisee threatens not to rescue</td>
<td>reward rescue</td>
<td>beneficiary pays cost of rescue plus reward</td>
</tr>
<tr>
<td>impossibility</td>
<td>contingency prevents performance</td>
<td>encourage precaution and risk-spreading</td>
<td>liability for the least-cost risk-bearer</td>
</tr>
<tr>
<td>frustration of purpose</td>
<td>contingency destroys purpose of performance</td>
<td>encourage precaution and risk-spreading</td>
<td>liability for the least-cost risk-bearer</td>
</tr>
<tr>
<td>mutual mistake about facts</td>
<td>buyer and seller make same mistake about facts</td>
<td>encourage precaution and risk-spreading</td>
<td>liability for the least-cost risk-bearer</td>
</tr>
<tr>
<td>mutual mistake about identity</td>
<td>buyer and seller have different object in mind</td>
<td>prevent involuntary exchanges</td>
<td>unwind contract</td>
</tr>
<tr>
<td>unilateral mistake</td>
<td>buyer or seller mistaken about facts</td>
<td>unite knowledge and control; encourage discovery</td>
<td>enforce contract</td>
</tr>
<tr>
<td>duty to disclose</td>
<td>promisee harms by withholding information</td>
<td>induce supply of true information</td>
<td>liability for harm</td>
</tr>
<tr>
<td>fraud</td>
<td>promisee supplies false information knowingly</td>
<td>deter supply of false information</td>
<td>no enforcement of contract and liability for harm</td>
</tr>
<tr>
<td>adherence contracts</td>
<td>cartel uses standard forms to promote collusion</td>
<td>destabilize cartels</td>
<td>deny enforcement to contracts of cartels</td>
</tr>
<tr>
<td>procedural unconscionability</td>
<td>consumer ignorant of critical terms in retailer’s contract</td>
<td>create incentive to communicate meaning of contract terms</td>
<td>deny enforcement unless bargaining process communicates crucial information</td>
</tr>
</tbody>
</table>
SUGGESTED READINGS

Game theory has become an important tool for analyzing contracts. Here are some articles using those techniques:


Recent law and economics papers on the legal doctrines covered in this chapter include the following:


To develop the model of performance and reliance more formally, we will apply math and graphs to the example of the Waffle Shop. Figure 7.6 depicts the relationship between Xavier’s expenditure and the probability that he will perform as promised. The variable $x$ denotes Xavier’s expenditure on performing; the variable $p$ denotes the probability of performing; and $p = p(x)$ denotes the functional relationship between the variables. The probability of performing increases when Xavier spends; thus, $p$ is an increasing function of $x$.

Now we turn from Xavier’s performance to Yvonne’s reliance. Figure 7.7 graphs the relationship between the size of Yvonne’s food order and her profits in September. By definition, profits in September equal total revenues minus total variable costs. Food orders are one cost that Yvonne can vary on short notice. To keep the example simple, we assume that she cannot vary any other costs in September. So the variable $y$, which denotes Yvonne’s expenditure on food orders, also indicates her total variable costs for the month.

Total revenues equal Yvonne’s income from selling meals in September. Her income from selling meals depends on whether she occupies the new building or the old building. If Xavier performs, then Yvonne occupies the new building on September 1 and she enjoys high revenues, as indicated in Figure 7.7 by the curve labeled $R_p(y)$. If Xavier does not perform, then Yvonne remains in the old building on September 1 and she enjoys low revenues, as indicated in Figure 7.7 by the curve labeled $R_{np}(y)$.

Figure 7.7 depicts profits, which equal the difference between total revenues and total variable costs, as the vertical distance between the appropriate total-revenue curve and the total-cost curve. The appropriate total-revenue curve depends on the probability that Xavier finishes the building on time. If Xavier is certain to finish the building on time, then $R_p(y)$ is the appropriate total-revenue curve. Conversely, if Xavier is certain to finish the building late, then $R_{np}(y)$ is the appropriate total-revenue curve.

Yvonne maximizes profits by maximizing the vertical distance between the appropriate total-revenue curve and the total-cost curve. When $R_p(y)$ is the appropriate total-revenue curve, the high level of reliance denoted $y_1$ in Figure 7.7 maximizes Yvonne’s profits. When $R_{np}(y)$ is the appropriate total revenue curve, the
FIGURE 7.6

*The direct relationship between levels of precaution and the probability of performance.*

![Graph showing the relationship between Xavier's expenditures on precaution (x) and the probability of performance (p(x)).]

FIGURE 7.7

*How a promisee’s reliance depends on the probability of a promisor’s performance.*

![Graph illustrating the relationship between reliance (y) and revenues if performance (new store), expenditures on reliance (total cost), and revenues if non-performance (old store).]
low level of reliance denoted \( y_0 \) in Figure 7.7 maximizes Yvonne’s profits. (At both levels of reliance, the marginal cost of reliance (given by the constant slope of the line through the origin) equals the marginal revenue from reliance (given by the slope of either \( R_p(y) \) or \( R_{np}(y) \)).)

Increasing the food order above \( y_0 \) is risky. The farther \( y \) rises above \( y_0 \) (up to the maximum \( y_1 \)), the more Yvonne’s profits increase if Xavier performs, and the more Yvonne’s profits decrease if Xavier breaches.

The concrete example of the Waffle Shop captures two general truths. First, the promisor can take costly precautions that increase the probability that he or she will perform as promised. Second, the more the promisee relies on the promise, the greater the profits if the promise is kept, and the lower the profits if the promise is broken.

2. Efficiency Efficiency requires choosing maximizing Yvonne’s expected profits minus Xavier’s expenditures. First consider Xavier’s expenditure on performance. More expenditures by Xavier increases his costs and Yvonne’s expected profits, which efficiency requires Xavier to balance. Second, consider reliance. Yvonne’s expenditures on reliance increase her profits if Xavier performs and decrease her profits if Xavier breaches. Efficiency requires Yvonne to balance the expected gains and losses of reliance.

We restate this verbal account of efficiency in notation. Efficiency requires choosing \( x \) and \( y \) to maximize Yvonne’s expected profits minus Xavier’s costs of precaution:

\[
\text{maximize } p(x)R_p(y) + [1 - p(x)]R_{np}(y) - y - x
\]

\( \begin{array}{ccc}
Y's \text{ expected revenues} & Y's \text{ food orders} & X's \text{ expenditure} \\
Y's \text{ expected profits} & & (7.1)
\end{array} \)

We will explain how to choose \( x \) and \( y \) to maximize the preceding function. First consider Xavier. He spends \( x \), which increases the probability \( p(x) \) that Yvonne enjoys high revenues equal to \( R_p(y) \), rather than low revenues equal to \( R_{np}(y) \). Efficiency requires the last dollar that Xavier spends to increase Yvonne’s expected revenues by a dollar, which we write

\[
1 = p'(x)[R_p(y) - R_{np}(y)]
\]

(If you know calculus, note that setting the partial derivative of equation 1 with respect to \( x \) equal to zero yields equation 7.2.)

Second, consider Yvonne. Increasing her expenditure \( y \) beyond \( y_0 \) increases her revenues \( R_p(y) \) with probability \( p \) and decreases her revenues \( R_{np}(y) \) with probability \( 1 - p \). Efficiency requires the last dollar that Yvonne spends in reliance to in-
crease her expected revenues by a dollar, which we write

\[
1 = pR_p y + (1 - p)R_{np} y
\]

(marginal reliance expected increase possible decrease expenditure in revenues in revenues) (7.3)

(If you know calculus, note that setting the partial derivative of equation 7.1 with respect to \( y \) equal to zero yields equation 7.3.)

Equations 7.2 and 7.3 determine the values of \( x \) and \( y \) that maximize equation 7.1. These values, denoted \( x^* \) and \( y^* \), are the efficient levels of precaution and reliance. The magnitude of \( y^* \) depends on the probability \( p \) that Xavier will perform. If performance is unlikely, then little reliance is efficient, so the efficient value of \( y \) is close to \( y_0 \). If performance is likely, then heavy reliance is efficient, so the efficient value of \( y \) is close to \( y_1 \). If the probability of performance is greater than zero and less than 1, then \( y^* \) is in-between \( y_0 \) and \( y_1 \).

3. Damages Measures  Consider several different damages measures. Expectation damages \( D_e \) put Yvonne in the same position as if Xavier performed. Thus, expectation damages equal the difference between Yvonne’s profits if Xavier performs, \( R_p(y) - y \), and her actual profits when he breaches, \( R_{np}(y) - y \). Thus, we define expectation damages:

\[
D_e = R_p(y) - R_{np}(y)
\]

(expectation damages performance revenues minus actual revenues) (7.4)

Opportunity-cost damages \( D_o \) put Yvonne in the same position after breach as if she had signed the best alternative contract. Yvonne signed the actual contract because she found its terms at least as good as the best alternative contract. To keep the model simple, we will say nothing explicit about the best alternative contract.

Reliance damages \( D_r \) put Yvonne in the same position after breach as if she had not signed a construction contract with Xavier or anyone else. If she had not signed a construction contract, she would have spent \( y_o \) on food and sold it in the old restaurant, thus receiving profits equal to \( R_{np}(y_o) - y_o \). She actually spent \( y \) on food, Xavier breached, and she received profits equal to \( R_{np}(y) - y \). The difference in profits equals her reliance damages:

\[
D_r = [R_{np}(y_o) - y_o] - [R_{np}(y) - y]
\]

(reliance damages profits if no contract actual profits) (7.5)

Now we compare the three damages measures. Performance on the contract that she actually signed is at least as good for Yvonne as performance on the best alternative contract. So expectation damages are at least as high as opportunity-cost damages: \( D_e \geq D_o \). The best alternative contract is at least as good for Yvonne as no contract. So opportunity-cost damages are at least as high as reliance damages: \( D_o \geq D_r \). In summary we have:

\[
D_e \geq D_o \geq D_r
\] (7.6)
4. Incentives for Efficient Precaution We described efficient behavior in words and notation, and then we described alternative measures of damages. Now we consider which measure of damages creates incentives for the promisor and promisee to behave efficiently.

Xavier bears the full cost of his own precaution $x$. Xavier also bears liability for damages $D$ with probability $[1 - p(x)]$. The sum, $(x + [1 - p(x)]D)$, equals Xavier’s expected costs. Xavier chooses $x$ to minimize his expected costs:

$$\min x, \quad x \text{precaution} + [1 - p(x)]D$$

Figure 7.8 depicts Xavier’s problem. As the figure illustrates, Xavier’s costs are high if he takes no precaution because his expected damages are large. His costs are also high if he takes excessive precaution, because the precaution costs more than it saves in liability. Xavier minimizes his costs by taking precaution at an intermediate level, denoted $x^*$ in Figure 7.8, where the expected cost curve falls to its lowest point. This occurs where an additional dollar spent on precaution reduces his expected liability by a dollar. In other words, his costs are minimized when the marginal cost of precaution equals the marginal reduction in expected liability:

$$\frac{1}{p'(x)} = D$$

marginal cost of precaution = marginal reduction in expected liability

Figure 7.8

A promisor’s expected costs of precaution and of breach.
We can compare the incentive effects of alternative measures of damages by substituting their definition for $D$ into equation 7.8. First consider expectation damages $D_e$ as defined by equation 7.4. Substitute this definition of $D_e$ for $D$ in equation 7.8 to obtain

$$
\frac{1}{H} = p'(x)[R_p(y) - R_{mp}(y)]
$$

marginal cost of marginal expected revenues (7.9)

This equation is identical to the efficiency condition in equation 7.2, which proves that expectation damages cause Xavier to take socially efficient precaution in order to minimize his expected costs.

It is easy to see why expectation damages create incentives for efficient precaution by the promisor. Promisors bear the full cost of their precaution. Their incentives are efficient when they also enjoy the full benefit. The full benefit equals any benefit that they receive plus the benefit that the promisees expect to receive. The benefit that promisees expect to receive equals the promisor’s liability under expectation damages. Therefore, 
\textit{expectation damages cause promisors to internalize the benefits of their precaution against breach}, which creates incentives for efficient precaution.

Now consider opportunity-cost damages and reliance damages. According to equation 7.6, expectation damages are at least as high as opportunity-cost damages, and opportunity-cost damages are at least as high as reliance damages. If the three damages are equal, then each of them provides incentives for efficient precaution by the promisor. If expectation damages exceed an alternative measure, then the alternative provides incentives for deficient precaution by the promisor. “Incentives for deficient precaution” means that the promisor minimizes expected costs by taking precaution below the efficient level. We summarize our conclusions as follows.

\begin{center}
\begin{tabular}{lll}
\textbf{Promisor’s Incentives for Precaution Against Breach} & & \\
expectation & opportunity-cost & reliance \\
$D_e$ & $D_o$ & $D_r$ \\
efficient & efficient & efficient \\
$D_e$ & $D_o$ & $D_r$ \\
efficient & deficient & deficient \\
\end{tabular}
\end{center}

Figure 7.9 depicts these facts. Increasing the expected damages $D$ increases
Xavier’s incentive to take precaution against events that cause him to breach. As damages increase from $D_r$ to $D_o$, and from $D_o$ to $D_e$, Xavier’s cost-minimizing level of precaution increases from $x_r$ to $x_o$ and from $x_o$ to $x_e$.

It is not hard to understand why awarding less than expectation damages provides incentives for deficient precaution. As explained, expectation damages cause the promisor to internalize the expected benefits of precaution. Consequently, awarding less than expectation damages causes the promisor to externalize part of the expected benefits of precaution. For example, opportunity-cost damages externalize the part of the promisee’s benefit from performance of the actual contract that the promisee could not obtain from the best alternative contract.

**QUESTION 7.42:** Explain why perfect expectation damages generally create incentives for efficient precaution by the promisor. Explain why perfect opportunity-cost or reliance damages do not generally create incentives for efficient precaution by the promisor.

**QUESTION 7.43:** Assume that the remedy for breach is specific performance.

a. Use Figure 7.9 to find the amount of precaution that Xavier would take if specific performance costs the promisor the same as expectation damages.

b. Use Figure 7.9 to describe the amount of precaution that Xavier would take if specific performance costs the promisor more than expectation damages. (What are you implicitly assuming about renegotiation between the promisor and promisee?)
**QUESTION 7.44:** Assume that disgorgement damages are the remedy for breach, and assume that disgorgement damages exceed expectation damages. Use Figure 7.9 to describe the amount of precaution that Xavier would take.

5. Incentives for Efficient Reliance  We explained that the efficiency of the promisor’s incentives for precaution depend on the level of damages (“total damages”). Expectation damages provide incentives for efficient precaution by the promisor against breach, whereas opportunity-cost damages and reliance damages provide deficient incentives. Now we explain how the law creates incentives for efficient reliance by the promisee. We will show that the efficiency of the promisee’s incentives for reliance depends on changes in damages caused by reliance (“marginal damages”).

Yvonne invests $y$ in reliance; she receives revenues $R_p(y)$ with probability $p$; and she receives revenues $R_{np}(y)$ and damages $D$ with probability $(12p)$. The probability-weighted sum equals her expected net profits. Yvonne chooses $y$ to maximize her expected net profits:

$$\text{maximize } \quad pR_p(y) + (1 - p)(R_{np}(y) + D) - y$$

Figure 7.10 depicts Yvonne’s maximization problem. Yvonne’s expected net profits are low if she does not rely ($y = 0$), because she does not order enough food in advance. Her expected net profits are also low if she relies excessively, because she orders too much food in advance. Yvonne maximizes her expected net profits by relying at an intermediate level, denoted $y^*$ in Figure 7.10, where the expected-net-profits curve reaches its highest point. This occurs where an additional dollar
spent in reliance increases her expected revenues and damages by a dollar. In other words, her net profits are maximized when the marginal cost of reliance equals the marginal increase in expected revenues and damages:

\[
1 = pR_p(y) + (1 - p)R_{np}(y) + (1 - p)D'
\]

marginal cost expected marginal expected marginal
of reliance revenues damages

(7.11)

(If you know calculus, note that setting the partial derivative of equation 7.10 with respect to \( y \) equal to zero yields equation 7.11.)

We can compare the incentive effects of alternative measures of damages by substituting their definition for \( D \) into equation 7.10. Recall that expectation damages restore the promisee to the position that he or she would have enjoyed if the promise had been kept. In the preceding chapter we defined perfect expectation damages as enough money to restore the promisee to the position that he or she would have enjoyed if the promise had been kept and if reliance had been optimal. Applied to the Waffle Shop, perfect expectation damages equal the difference between Yvonne’s revenues when Xavier performs and her revenues when he breaches, assuming optimal reliance \((y = y^*)\):

\[
D^* = R_p(y^*) - R_{np}(y^*)
\]

perfect expectation expected revenues minus actual
damages revenues, given optimal reliance

(7.12)

Notice that equation 7.12 does not contain Yvonne’s actual reliance \( y \). It contains her optimal reliance \( y^* \). When reliance equals \( y^* \), Yvonne’s expected recovery of damages does not vary with her actual reliance. An additional dollar of reliance \( y \) by Yvonne does not change the damages that she receives. “Marginal damages,” denoted \( D' \), means the increase in damages when Yvonne spends another dollar in reliance. Thus, if Yvonne had relied optimally, her marginal damages would equal zero: \( D' = 0 \). Substitute \( D' = 0 \) into equation 7.11 to obtain

\[
1 = pR_p(y) + (1 - p)R_{np}(y)
\]

marginal reliance expected increase expected decrease
expenditure in revenues in revenues

(7.13)

Equation 7.13 is identical to the efficiency condition in equation 7.3, which proves that perfect expectation damages cause Yvonne to rely at the socially efficient level.

It is easy to see why perfect expectation damages create incentives for efficient reliance by the promisee. Efficiency requires the person who increases risk to bear it. The promisee’s reliance increases risk, specifically the risk that breach will destroy the value of the promisee’s investment. Perfect expectation damages remain constant when the promisee relies more than is optimal. Thus, the risk caused by more reliance remains with the promisee. In brief, perfect expectation damages cause the promisee to internalize the risk of more than optimal reliance.
To illustrate, we contrast perfect and imperfect expectation damages in Figure 7.11. The curve labeled “no damages” indicates Yvonne’s expected net profits when $D = 0$. Shift this curve up by the amount of perfect expectation damages, $D^* = D(y^*)$, to obtain the curve labeled “perfect damages.” Perfect damages remain constant as reliance increases, so $D' = 0$. The curve labeled “perfect damages” in Figure 7.11 achieves its high point when Yvonne relies optimally: $y = y^*$.

Finally, the curve labeled “imperfect damages” in Figure 7.11 indicates Yvonne’s expected net profits when damages change as a function of reliance: $D = D(y)$. Notice that imperfect damages $D(y)$ increase as Yvonne’s reliance $y$ increases, so marginal damages exceed zero: $D' > 0$. This fact causes Yvonne’s expected-net-profit curve to shift to the right for values of $y$ above $y^*$, as depicted in Figure 7.11. As a result of the shift to the right, Yvonne’s expected-net-profit curve achieves its maximum at a level of reliance, denoted $y^*$, that exceeds the efficient reliance $y^*$. In brief, Figure 7.11 illustrates that positive marginal damages ($D' > 0$) cause overreliance ($y > y^*$).

**Question 7.45:** Why does the “no-damages” curve achieve its maximum in Figure 7.11 for the same value of $y$ as the “perfect-damages” curve?

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45 Three facts explain the shape of the imperfect-damages curve as depicted in Figure 7.11. (1) Perfect damages exceed imperfect damages at deficient levels of reliance: $D^*_e > D(y)$ for $y < y^*$; (2) perfect damages equal imperfect damages at the efficient level of reliance: $D^*_e = D(y)$ for $y = y^*$; (3) imperfect damages exceed perfect damages for excessive levels of reliance: $D(y) > D^*_e$ for $y > y^*$.  
46To prove that Yvonne’s reliance increases when $D$ increases from zero to a positive number, notice that $D' > 0$ implies that the right side of equation 7.11 exceeds the efficiency condition given by equation 7.3 (and repeated in 7.13) for any given value of $y$. 
curve? Explain why “no damages” provides efficient incentives for reliance by Yvonne and inefficient incentives for precaution by Xavier.

**QUESTION 7.46:** The “imperfect-damages” curve in Figure 7.11 lies below the “perfect-damages” curve for values of \( y \) smaller than \( y^* \). The opposite is true for values of \( y \) larger than \( y^* \). Consider a composite consisting of the imperfect-damages curve for values of \( y \) less than \( y^* \) and the perfect-damages curve for values of \( y \) greater than \( y^* \):

\[
D = D(y) \text{ for } y, y^*; \\
D = D(y^*) \text{ for } y > y^*.
\]

Assume that Yvonne’s expected profits correspond to this composite curve. Thus, Yvonne receives compensation for actual damages up to a maximum value of \( D(y^*) \). Given this composite measure of damages, what level of reliance \( y \) maximizes Yvonne’s expected profits?

**QUESTION 7.47:** Assume that the parties cannot renegotiate after breach. Also assume that the remedy for breach is specific performance. Specific performance guarantees that Xavier will perform. Will Yvonne set her reliance \( y \) equal to \( y_0 \), \( y^* \), or \( y_1 \) in Figures 7.7 and 7.11? Explain your answer.

**QUESTION 7.48:** Assume that disgorgement damages are the remedy for breach. Disgorgement damages depend on the profits earned by the promisor as a result of breaching. Consequently, disgorgement damages do not vary with the promisee’s reliance \( (D' = 0) \). Use Figure 7.11 to explain the incentive effects of disgorgement damages on Yvonne’s reliance.