Chapter 6

AN ECONOMIC THEORY OF CONTRACT

“[T]he movement of the progressive societies has hitherto been a movement from Status to Contract.”

Henry Maine, ANCIENT LAW 170 (1861)

“Whoever offers to another a bargain of any kind, proposes to do this: Give me that which I want, and you shall have this which you want, is the meaning of every such offer; and it is in this manner that we obtain from one another the far greater part of those good offices which we stand in need of. It is not from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner, but from their regard to their own interest.”

Adam Smith, THE WEALTH OF NATIONS 22 (5TH ED. 1789)

“A promise invokes trust in my future actions, not merely in my present sincerity.”

Charles Fried, CONTRACT AS PROMISE 11 (1981)

People continually make promises: sales people promise happiness; lovers promise marriage; generals promise victory; and children promise to behave better. The law becomes involved when someone seeks to have a promise enforced. Here are some examples:

Example 1: The Rich Uncle. The rich uncle of a struggling college student learns at the graduation party that his nephew graduated with honors. Swept away by good feeling, the uncle promises the nephew a trip around the world. Later the uncle reneges on his promise. The student sues his uncle, asking the court to compel the uncle to pay for a trip around the world.
Example 2: The Rusty Chevy. One neighbor offers to sell a used car to another for $1000. The buyer gives the money to the seller, and the seller gives the car keys to the buyer. To her great surprise, the buyer discovers that the keys fit the rusting Chevrolet in the backyard, not the shiny Cadillac in the driveway. The seller is equally surprised to learn that the buyer expected the Cadillac. The buyer asks the court to order the seller to turn over the Cadillac.

Example 3: The Grasshopper Killer. A farmer, in response to a magazine advertisement for “a sure means to kill grasshoppers,” mails $25 and receives in the mail two wooden blocks with the instructions, “Place grasshopper on Block A and smash with Block B.” The buyer asks the court to require the seller to return the $25 and to pay $500 in punitive damages.

Should the courts enforce the promises in these examples? A promise is enforceable if the courts offer a remedy to the victim of the broken promise. Traditionally, courts have been cautious about enforcing promises that are not given in exchange for something. In Example 1, the promise of a trip around the world is a gift to the nephew. The rich uncle does not receive anything in exchange, so, according to the traditional analysis, the courts should not enforce the uncle’s promise. In Example 2, money exchanges for a promise, but the seller thought that he gave a different promise than the buyer thought she received. Courts often refuse to enforce confused promises. In Example 2, the courts would probably require the seller to return the money and the buyer to return the car keys. Example 3 involves deception, not confusion. A “sure method to kill grasshoppers” means something more than what the seller delivered. The courts ordinarily offer a remedy to the victims of deceptive promises.

If an enforceable promise was broken, what should the remedy be? One remedy requires the promise-breaker to keep the promise. For example, if the court decided that the seller in Example 2 broke his promise, then the court might order the seller to deliver the Cadillac to the buyer. This kind of remedy is unavailable in Example 3 because the seller cannot exterminate grasshoppers as promised. Instead, the remedy in Example 3 must involve the payment of money damages as compensation for the failure to provide an effective grasshopper killer.

Our examples illustrate the two fundamental questions in contract law: “What promises should be enforced?” and “What should be the remedy for breaking enforceable promises?” Courts face these questions when deciding contract disputes and legislatures face these questions when debating bills to regulate contracts. A theory of contract law must guide courts, legislatures, and private parties (and their lawyers) who seek to form contracts and who must decide whether to perform or breach those promises by answering these two questions.

I. BARGAIN THEORY: AN INTRODUCTION TO CONTRACTS

In the late 19th and early 20th centuries, Anglo-American courts and legal commentators developed the *bargain theory of contracts* to answer the two fundamental questions of contract law. The bargain theory held that the law should
enforce promises given in a bargain. To implement this answer, theorists isolated and abstracted the minimal elements of a typical bargain. The minimal elements of a bargain remain fundamental to the way lawyers think about contracts. We will explain the bargain theory in order to isolate the minimal elements of a bargain, and then use these elements as building blocks in an economic theory of contracts.

A. What Promises Should Be Enforceable At Law?

“What promises should be enforceable at law?” The bargain theory has a clear answer to this question, which we call the bargain principle: a promise is legally enforceable if it is given as part of a bargain; otherwise, a promise is unenforceable. The bargain theory makes enforcement hinge upon classifying promises as “bargains” or “nonbargains.” Consequently, the theory requires an exact specification of the necessary and sufficient conditions for the court to conclude that a bargain occurred.

The bargain theorists distinguished three conditions: offer, acceptance, and consideration. “Offer” and “acceptance” have the same meaning in this theory as they do in ordinary speech: one party must make an offer (“I’ll take that rusty Chevy over there for $1000”), and the other must accept it (“Done”). Sometimes business practices and social conventions prescribe the signals for making and accepting offers. For example, a buyer at an auction may signal an offer to buy by raising his or her hand, and the auctioneer may signal acceptance by shouting “Sold!” Sometimes contract law and statutes specify procedures for offer and acceptance. For example, most states require written contracts and registration for sales of land.

The “promisor” refers to the person who gives a promise, and the “promisee” refers to the person who receives a promise. In a bargain, the promisee induces the promisor to give the promise. The inducement may be money, as when the farmer pays $25 for the promise of a device that kills grasshoppers. The inducement may be goods, as when an automobile dealer delivers a car in exchange for the promise of future payment. The inducement may be a service, as when a painter paints a house in exchange for the promise of future payment. Or the inducement may be another promise, as when a farmer promises to deliver wheat to a wholesaler in the fall, and the wholesaler promises to pay a certain price upon delivery. The forms of a bargain thus include money-for-a-promise, goods-for-a-promise, service-for-a-promise, and promise-for-a-promise.

Regardless of form, each bargain involves reciprocal inducement: the promisee gives something to induce the promisor to give the promise, and the promisor gives the promise as inducement to the promisee. Common law uses the technical term consideration to describe what the promisee gives the promisor to induce the promise. Thus, the farmer’s payment of $25 is consideration for the promise to supply a device that kills grasshoppers. The delivery of a car, the painting of a house, or a promise to deliver crops may be consideration for a promise of future payment.

According to the bargain theory, the contract remains incomplete until the promisee gives something to the promisor to induce the promise. When completed,
the contract becomes enforceable. In other words, **consideration makes the promise enforceable**. The bargain theory holds that promises secured by consideration are enforceable and promises lacking consideration are unenforceable.

Let us illustrate the bargain theory by applying it to the three examples at the beginning of this chapter. In Example 1, the nephew apparently did not give anything as inducement for his rich uncle’s promise of a trip around the world. Apparently there was no consideration, so the promise is unenforceable. In general, the promise to give a pure gift, which is not induced by the promise of something in return, is not enforceable under the bargain theory.

In contrast, consideration was given in Example 2 in exchange for the promise to supply the used car. The question raised in Example 2 is whether there was offer and acceptance. The seller thought they were discussing the rusty Chevy and the buyer thought they were discussing the immaculate Cadillac. The seller offered to sell one good and the buyer agreed to buy another good. There was no “meeting of the minds.” Without a meeting of the minds, there is no offer and no acceptance, just a failure to communicate.

In Example 3, the seller offered a sure method for killing grasshoppers in exchange for $25, the buyer accepted the offer, and consideration took the form of the payment of $25. Therefore, the promise is enforceable according to the bargain theory.

We conclude this section by relating bargains to fairness. Most people have beliefs about fair bargains. In a fair bargain, each party gives equivalent value. In the language of law, a contract is fair when the value of the promise is proportional to the value of the consideration. Conversely, in an unfair bargain, the value of the promise is disproportional to the value of the consideration. To illustrate an unfair bargain, the elder brother (Esau) in a famous Bible story promised to give his inheritance rights to a younger brother (Jacob) in exchange for a bowl of soup.

According to bargain theory, a court should enforce promises induced by consideration, regardless of whether the consideration was equivalent in value to the promise. It is enough for enforceability under the bargain theory that the promisor found the consideration adequate to induce the promise. Bargain theory holds that courts should determine whether a bargain occurred, not inquire into whether the bargain was fair. Consequently, the doctrine of consideration requires courts to enforce some unfair promises, such as exchanging one’s inheritance for a bowl of soup.¹

An alternative theory would limit courts to enforcing fair bargains. To apply such a theory, a court would have to ask whether the value of the promise was equivalent to the value of the consideration. People often disagree about the value of goods, and litigants often disguise values from courts. Determining whether equivalents were exchanged requires courts to obtain a lot of information. Supervising all bargains for fairness would burden the courts and inhibit commerce. Consequently, most people want the courts to enforce bargains, not to supervise them.

¹ If Esau were starving to death when he promised his inheritance for a bowl of soup, the contract might not be enforceable under the bargain doctrine because of an exception, discussed in the next chapter, called the “necessity defense.”
Perhaps this fact explains why courts do not routinely examine bargains for fairness. However, some bargains are so one-sided that most people require little information to condemn them as unfair. Modern U.S. courts sometimes refuse to enforce extremely one-sided bargains. (See the discussion of “unconscionability” in the next chapter.)

In most English-speaking countries, traditional common-law doctrine requires “consideration” for a promise to be enforceable. (See accompanying box entitled “Humpty-Dumpty Jurisprudence.”) Instead of relying upon “consideration” to identify the essential element of an enforceable promise, however, the civil law tradition that prevails in continental Europe relies upon the equally mysterious idea of “cause.” Just as the bargain theory attempts to explain “consideration,” so various theories have been advanced to explain “cause,” such as the will theory. According to the will theory, a binding contract requires an intention by the parties to be bound. This idea resembles an idea in the economic theory of contract, which we develop in Part II of this chapter.

| HUMPTY-DUMPTY JURISPRUDENCE:  
THE LIFE HISTORY OF THE WORD “CONSIDERATION” |

“When I use a word, it means just what I choose it to mean—neither more nor less.”
—Humpty-Dumpty in Lewis Carroll, THROUGH THE LOOKING-GLASS

In the bargain theory of contracts, “consideration” means something the promisee gives the promisor to induce the promise. According to the bargain theory, consideration makes the promise enforceable. Anglo-American courts accepted the bargain theory in the early years of this century and adopted the legal principle that consideration makes a promise enforceable. Then, as the years passed, exceptions to the principle accumulated. Courts, however, are slow to discard the abstract principles that they adopt. Instead of renouncing the principle of consideration, the courts did something characteristic of them: they changed the meaning of “consideration.” Instead of meaning “something the promisee gives the promisor to induce the promise,” the word “consideration” as used by the courts came to mean “the thing that makes a promise enforceable.”

A tautology is a proposition that is true by definition of the words, such as “All husbands are married.” When the courts changed the meaning of “consideration,” they reduced the legal principle of consideration to a tautology. If “consideration” means “the thing that makes a promise enforceable,” then the principle “consideration makes a promise enforceable” has no bite. When reduced to a tautology, a legal principle merely draws our attention to the meaning of a word, rather than telling us something about the legal consequences of our actions. Having made the principle of consideration into a tautology, the courts could assert its truth without fear of being wrong. Hence, we have an example of Humpty-Dumpty jurisprudence.

QUESTION 6.1: People often change the form of a promise in an attempt to increase their certainty that courts will enforce it according to its terms. For example, suppose the rich uncle in Example 1 wanted to
assure his nephew of the enforceability of the promise of a trip around the world. Courts are more certain to enforce bargain-promises than gift-promises. Tradition prescribes how to change the form of a promise from a gift to a bargain. According to tradition, the uncle would solemnly offer to give his nephew a trip around the world in exchange for a peppercorn (a piece of pepper), and the nephew would solemnly give the uncle a peppercorn. More recently, people disguise a gift as a bargain by intoning the phrase “in consideration for which, I give you $1.” Will this charade make the uncle’s promise enforceable under the bargain theory? Answer this question by using the doctrine that courts inquire into the presence of consideration but not its adequacy. Also answer this question using the doctrine that courts should refuse to enforce extremely unfair bargains.

**Question 6.2:** Roman law enforced certain kinds of promises and withheld enforcement of other kinds of promises. Enforcement of a promise in Roman law usually required offer and acceptance, but enforcement did not generally require consideration. Roman law lacked the doctrine of consideration because it was not based upon bargain theory. Relate these facts about Roman law to the enforceability of a promise to give a gift.

**B. What Should Be the Remedy for the Breach of Enforceable Promises?**

The bargain theory also had an answer to the second fundamental question of contract theory: “What should be the remedy for the breach of enforceable promises?” According to the bargain theory, the promisee is entitled to the “benefit of the bargain”—that is, to the benefit he or she would have obtained from performance of the promise. Computing compensation under this formula involves answering the counterfactual question “How well-off would the promisee have been if the promise had been kept?” The counterfactual question concerns the benefit that the promisee could reasonably expect from performance. Consequently, the damage measure under the bargain theory is called *expectation damages*.

Note the connection between the answers to the questions “What promises should be enforced?” and “What should be the remedy for breach of enforceable promises?” Promises should be enforced, according to the bargain theory, if they are part of a bargain, and the remedy for the breach of an enforceable promise is an award of the value expected of the bargain. The fact of a bargain establishes enforceability, and the expected value of a bargain measures damages.

Assume that the promises are enforceable in the three examples at the beginning of the chapter. What measures expectation damages? The student’s expectation damage in Example 1 equals the value to him of a trip around the world. The buyer’s expectation damage in Example 2 equals the difference in the value that he places on the rusty Chevy and the value that she places on the immaculate Cadillac. In Example 3, the farmer’s expectation damage equals the value of the crops destroyed by grasshoppers.
Counterfactual values are difficult to compute. The cost of a trip around the world, as in Example 1, depends on the route taken and whether the traveler goes first class or economy class. The value of a unique, old Cadillac, as in Example 2, depends upon the buyer’s subjective preferences. The value of killing the grasshoppers in Example 3 depends upon the value of the crops that would have been harvested if they had not been destroyed by insects.

C. A Criticism of the Bargain Theory

The answer that the bargain theory gives to the first question of contract law is clear. Unfortunately, as a description of what courts actually do, the answer is also wrong. Sometimes the person who makes a promise wants it enforced and so does the person who receives it. Contract law should enforce such a promise in order to help the people get what they want. However, the bargain theory denies enforcement when the promise did not arise from a bargain.

For example, assume that a buyer begins her search for a car by taking a new Chevrolet for a test drive. After the test drive, the buyer plans to continue her search by visiting other car dealers. The seller wants to induce the buyer to consider carefully the purchase of the new Chevrolet. Consequently, the seller promises to sell the new Chevrolet to the buyer for a stated price, provided that the buyer accepts within one week. In other words, the seller makes a “firm offer” and promises to “keep it open” for one week. The buyer does not want to waste her time by considering the offer carefully and then finding that the seller has reneged. Consequently, the buyer wants the promise to be enforceable. The seller knows that the buyer is more likely to consider the offer carefully if the promise is enforceable, so the seller wants the promise to be enforceable. Thus, both the promisor and the promisee want the promise to be enforceable. Despite the wishes of both parties, the bargain theory withholds enforcement of the promise because the buyer gave nothing to the seller in exchange for the seller’s promise to keep the offer open (“no consideration”).

As another example, assume that a prominent alumna promises to give Old Siwash University the funds to construct a new building. The university wants to begin construction immediately. The alumna also wants the university to begin construction immediately. To obtain cash for the donation, the alumna must liquidate assets, which will take some time. The university dare not begin construction without an enforceable promise. In this example, both parties want the promise to be enforceable, but the bargain theory withholds enforcement of this promise. The bargain theory withholds enforcement because the promise “lacks consideration.” Gift-promises are not induced by the prospect of gain, so they always lack consideration.

In the two preceding examples, both parties to the promise want it to be enforceable, yet the bargain theory withholds enforcement. A legal theory that frustrates the desires of the people affected by the law can be called dogmatic. In contrast, a legal theory that satisfies the desires of the people affected by the law can be called responsive. In general, a responsive theory maximizes the well-being of people, whereas a dogmatic theory sacrifices the well-being of people in favor of other ends. Contemporary courts in America prefer to be responsive rather than
dogmatic. Consequently, contemporary courts in America often enforce firm offers and gift-promises. As a result of such facts, the bargain theory is typically regarded as wrong.

We have seen that the bargain theory of contract is not a particularly good theory of contracting. It is both overinclusive (in arguing for the enforceability of contracts that, on most other grounds, ought not to be enforced) and underinclusive (in not arguing for the enforceability of promises that both parties truly want enforced). Moreover, the theory does not describe what courts actually do. It does not, that is, accurately predict which promises are legally enforceable and which are not. We want a more general theory that describes what courts actually do and can explain which consensual agreements are likely to be enforced (and to what extent) in any legal system.

II. AN ECONOMIC THEORY OF CONTRACT

We want to replace the bargain theory with a less dogmatic, more responsive theory of contracts. In the two preceding examples, enforceability of the contract apparently makes two people better off, as measured by their own desires, without making anyone worse off. Whenever a change in the law makes someone better off without making anyone worse off, “Pareto efficiency” requires changing the law. “Pareto-efficient law” is a technical name for responsive law. A theory of law based upon Pareto efficiency is responsive, not dogmatic.

In general, economic efficiency requires enforcing a promise if the promisor and promisee both wanted enforceability when it was made. We will develop this central idea in the economic theory of contracts to answer the first question of contract law, “What promises should be enforced?”

A. Cooperation and Commitment

Many exchanges occur instantly and simultaneously, as when a shopper pays cash for goods in the grocery store. In a simultaneous, instantaneous exchange, there is little reason to promise anything. The making of promises, however, typically concerns deferred exchanges—that is, transactions that involve the passage of time for their completion. For example, one party pays now and the other promises to deliver goods later (“payment for a promise”); one party delivers goods now and the other promises to pay later (“goods for a promise”); or one party promises to deliver goods later, and the other promises to pay when the goods are delivered (“promise for a promise”).

2 The Uniform Commercial Code § 2–205 allows for certain, but not all, firm offers to be enforceable for a period not exceeding three months. (The UCC is described in a box at the beginning of Chapter 7.) American courts generally enforce gift-promises to the extent of reasonable reliance. Where the promisee is a non-profit organization like a university, American courts sometimes enforce gift-promises to the full extent of the promise.

3 One famous commentator on the history of contract theory—Grant Gilmore, The Death of Contract (1974)—believed that the classical or bargain theory was dead almost as soon as it was born.
The passage of time between the exchange of promises and their performance creates uncertainties and risks. Uncertainties and risks present obstacles to exchange and cooperation. To illustrate, consider deferred exchange when promises are *unenforceable*. The seller asks the buyer to pay now for future delivery of goods. This unenforceable promise involves a high risk that the seller will not deliver the goods as promised. A cautious buyer may refuse to pay now for an unenforceable promise to deliver goods in the future. The cautious buyer wants something stronger than a moral obligation of the seller to deliver the goods. In addition, the cautious buyer wants a legal obligation of the seller to deliver the goods. The cautious buyer may be willing to pay now for an *enforceable* promise to deliver goods in the future. Thus, the enforceability of promises encourages exchange and cooperation among people.

Notice that both parties in this example want the seller’s promise to be enforceable at the time it is made. The cautious buyer wants enforceability to provide an incentive for seller’s performance and a remedy for seller’s breach. The seller wants enforceability in order to induce the buyer to make the purchase. By enforcing the promise, the court can give both parties what they want. Giving them what they want promotes exchange and encourages cooperation by reducing uncertainty and risk.

To develop these insights, we describe a situation called the “agency game” that often arises in business. In this game, the first player decides whether to put a valuable asset under the control of the second player. The first player might be an investor in a corporation, a consumer advancing funds to purchase goods, a depositor at a bank, the buyer of an insurance policy, or a shipper of goods, to list some possibilities. If the first player puts the asset under the second player’s control, the second player decides whether to cooperate or appropriate. Cooperation is productive. Productivity could take the form of the profit from investment, the surplus from trade, or the interest from a loan. The parties divide the product of cooperation between them, so both of them benefit. Appropriation is redistributive. Redistribution benefits the second player at the expense of the first player.

We depict these alternatives in Figure 6.1 and attach numbers to them. The numbers indicate the difference in the wealth of the two players before playing the agency game and after playing it. The first player to move in Figure 6.1 decides

**Figure 6.1**

*Agency game without contract.*

<table>
<thead>
<tr>
<th></th>
<th>Second player (agent or promisor)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cooperate</td>
<td>Appropriate</td>
<td></td>
</tr>
<tr>
<td>Invest</td>
<td>.5</td>
<td>.5</td>
<td>1.0</td>
</tr>
<tr>
<td>Don’t invest</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
whether to make an investment of 1. If no investment is made, the game ends and
the players receive nothing. If an investment is made, the second player decides
whether to cooperate or appropriate. Cooperation produces a total payoff of 1. The
players divide the total payoff equally; the first player recovers the investment of
1 and also receives a payoff of .5, and the second player receives a payoff of .5.
Thus, the two players benefit equally from playing the agency game. Alternatively,
the second player can appropriate. Appropriation enables the second player to ac-
quire the first player’s investment, while producing nothing: the first player loses
1, and the second player gains 1.

Consider the best moves for each player to make in Figure 6.1. If the first
player invests, then the second player receives more from appropriating than co-
operating. Consequently, the second player’s best move is to appropriate.4 The first
player may anticipate that the second player will appropriate. Consequently, the
first player’s best move is “don’t invest.” We have shown that the solution to the
agency game in Figure 6.1 is “don’t invest.”

The payoffs to the agency game in Figure 6.1 assume that the parties cannot
make an enforceable contract. The barrier to an enforceable contract might be
dogmatic law or corrupt courts. Now consider how the matrix changes if we as-
sume responsive law and honest courts, so the parties can make an enforceable
contract. We assume that the second player offers to cooperate in exchange for an
investment by the first player, and the first player accepts the offer by investing.
The first player’s investment is consideration for the second player’s promise. We
assume that the law will hold the second player liable for compensatory damages
in the event that the player breaks the promise and appropriates.

Figure 6.2 depicts the revised payoffs in the agency game when the first player
offers to invest in exchange for an enforceable promise by the second player to co-
operate. Consider the payoffs to the first player. If the first player invests and the
second player performs, the first player recovers his or her investment and receives
an additional payoff equal to .5. If the first player invests and the second player

\[ \begin{array}{c|cc}
\text{First player} & \text{Perform} & \text{Breach} \\
\hline
\text{Invest} & .5 & -.5 \\
\text{(contract)} & .5 & .5 \\
\text{Don’t invest} & 0 & 0 \\
\text{(no contract)} & 0 & 0 \\
\end{array} \]

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4 Game theorists describe a move that is best against any possible move by the other side as a “domi-
nant strategy.” In Figure 6.1, the second player has a dominant strategy. The first player does not have
a dominant strategy, but the first player has a best reply to the second player’s dominant strategy.
breaches, the first player receives compensatory damages. We assume that com-
пensatory damages restore the first player’s payoff to the level that he or she would
have enjoyed if the second player had performed. If the second player had per-
formed, the first player would have recovered the investment of 1 and received a
payoff of .5. Thus, the first player receives a net payoff of .5 from investing, re-
gardless of what the second player does. Alternatively, the first player can receive
a payoff of 0 from not investing. Faced with these two alternatives, investing is the
first player’s best move.

Assume that the first player invests and consider the payoffs to the second
player. The second player receives a payoff of .5 from performing as promised
(cooperating). In contrast, breaching the contract (appropriating) yields a payoff
of 1 to the second player, from which the second player must pay compensation to
the first player. As compensation, the first player must receive 1 that he or she in-
vested and .5 that was expected in profits. Consequently, liability of 1.5 must be
subtracted from the second player’s payoff of 1, yielding a net payoff of −.5 for
breaching the contract. So the best move for the second player is to cooperate.

Figure 6.1 shows that the first player does not invest when promises are un-
enforceable. Figure 6.2 shows that the first player invests and the second player co-
operates when promises are enforceable. Thus, an enforceable contract converts a
game with a noncooperative solution into a game with a cooperative solution. The
first purpose of contract law is to enable people to cooperate by converting games
with noncooperative solutions into games with cooperative solutions.

We have shown that the unique solution of the agency game with a contract
is “invest” and “perform” (cooperate). So far we have discussed the best move for
each player from that player’s viewpoint. Now consider the sum of the payoffs to
both players. The sum of the payoffs to both players is found by adding the two
numbers in each cell in Figure 6.1 or Figure 6.2. Efficiency requires choosing the

cell that maximizes the sum of the payoffs. The numbers sum to 1 when the first
player invests and the second player cooperates. Otherwise, the numbers sum to
zero. Investing and cooperating are productive, whereas “don’t invest” changes
nothing and “appropriate” merely redistributes money from the first player to the
second player. Given these facts, we could restate the preceding conclusion: The
first purpose of contract law is to enable people to convert games with inefficient
solutions into games with efficient solutions.

The language of game theory clarifies how enforceable contracts promote co-
operation. In game theory, a commitment forecloses an opportunity. To illustrate
from a classical book on the art of war, the Chinese philosopher Sun Tzu writes,
“When your army has crossed the border [into hostile territory], you should burn
your boats and bridges, in order to make it clear to everybody that you have no
hankering after home.” Burning the bridges commits the army to attack by fore-
closing the opportunity to retreat. Similarly, making a contract commits the second

5 To be precise, cost-benefit efficiency requires choosing the cell that maximizes the sum of the pay-
offs, and cost-benefit efficiency in this example corresponds to Pareto efficiency.
6 Sun Tzu, THE ART OF WAR, section IX, part 3.
player in Figure 6.2 to cooperate. Commitment is achieved by foreclosing the opportunity to appropriate. The opportunity to appropriate is foreclosed by the high cost of liability.

A commitment is credible when the other party observes the foreclosing of an opportunity. To illustrate, the army’s commitment to advance was credible in so far as the enemies observed the burning boats and bridges. Similarly, the second player makes a credible commitment to cooperate in Figure 6.2 provided that the first player knows the second player’s payoffs. If the first player knows the second player’s payoffs in Figure 6.2, the first player recognizes that cooperating is in the second player’s best interest.

We answered the first question of contract law, “What promises should be enforced?”, by asserting that a promise should be enforced if both parties wanted it to be enforceable when it was made. Both parties want a promise to be enforceable so that the promisor can credibly commit to performing. A credible commitment to performing enables the parties to cooperate, and cooperation is efficient.

To illustrate, recall the example of the rich uncle who promised his nephew a trip around the world. The rich uncle may need to liquidate some assets to obtain the money needed for his nephew’s trip. In the meantime, the nephew may need to prepare for the trip by making some purchases (plane tickets, luggage, snowshoes for the arctic, etc.). The nephew is reluctant to use his own money to make the purchases unless the law will enforce his uncle’s promise. Consequently, the nephew wants the promise to be enforceable when it is made. The uncle wants the nephew to prepare for the trip. Consequently, the uncle also wants the promise to be enforceable when it is made. Enforceability of the promise enables the uncle to make a credible commitment to his nephew, and a credible commitment enables them to cooperate.

In the second example in the beginning of this chapter, the buyer thought that she was buying a shiny Cadillac, and the seller thought that he was selling a rusty Chevrolet. The buyer wanted a promise to be enforceable when made, and so did the seller, but the buyer and seller had different promises in mind. They mistakenly believed that both of them had the same promise in mind. In reality, cooperation between them could not produce a surplus. The case of the rusty Chevy illustrates the absence of an agreement to cooperate.

In the third example in the beginning of this chapter, the farmer sent $25 for a promise to supply “a sure means to kill grasshoppers.” The seller knew that he made a deceptive offer. A deceptive offer provides no basis for cooperation. We have stated that economic efficiency requires enforcing a promise if the promisor and promisee both wanted enforceability when the promise was made. In the example of the grasshopper killer, the promisee wanted the promise to be enforceable and the promisor wanted the promise to be unenforceable. In this example, the law does not enforce the promise to enable the parties to cooperate. Rather, the law enforces the promise to discourage one party from deceiving the other. Enforcing some deceitful promises discourages people from making them. Example 3 illustrates that efficiency sometimes requires enforcing a promise even though one of the parties did not want enforceability when the promise was made. We encounter more examples in the next chapter when we discuss asymmetrical information between promisor and promisee.
**QUESTION 6.3:** Explain why the economic theory of contracts would enforce the firm offer to sell a Chevrolet and the promise of a gift to Old Siwash University.

**QUESTION 6.4:** Explain why the numbers in Figure 6.2 indicate that the second player is liable for *expectation* damages in the event of breach.

**QUESTION 6.5:** In Figure 6.2, both parties desire enforceability of the second player’s promise when the promise is made, but when the time comes to perform, the promisor may not want enforceability. What do these facts say about the Pareto efficiency of enforcing the second player’s promise? (Hint: Distinguish between the Pareto efficiency of enforceability when the promise is made, which can be called *ex ante* Pareto efficiency, and the Pareto efficiency of actually enforcing the promise when the time comes to perform, which can be called *ex post* Pareto efficiency.)

**QUESTION 6.6:** As an exercise in legal vocabulary, let us modify the facts about the contract in Figure 6.2 and describe it differently. Assume that the first player offers to invest in exchange for the second player’s promise to cooperate, and the second player accepts by promising to cooperate. What is the “consideration” in this contract?

**QUESTION 6.7:** Figure 6.2 describes a game based upon a bargain. Construct a similar matrix to describe a game based upon a firm offer.

---

**B. Information**

An important part of fostering commitment and cooperation between contracting parties is the exchange of information between them. Before they form the contract, the parties have private knowledge about what they hope to get out of the relationship, the prices and other terms to which they would be willing to commit, the duration of the relationship that they anticipate, the aspects of the promise that really mean a great deal to them and the aspects that are not so important. In addition, one party may possess information about the potential agreement that the other party does not possess but values highly—for example, that the farmland they are about to sell and buy actually contains valuable mineral deposits.

These are situations of asymmetric information, and as we saw in Chapter 2, asymmetric information can cause problems for arm’s-length transactions. Indeed, as we saw, the presence of asymmetric information can preclude otherwise mutually beneficial exchanges from taking place.

Contract law can help private parties deal with asymmetric information by crafting rules of formation and enforcement that guide the parties about which information they have an obligation to divulge and which information they can
keep to themselves. As a result, *the second purpose of contract law is to encourage the efficient disclosure of information within the contractual relationship.*

C. Performance

Now we turn to the second question of contract law, “What should be the remedy for breaking enforceable promises?” We will answer the second question by using the same analytical framework that we used to answer the first question. Think of the remedy as the “price” paid by the promisor for breaching the contract. The higher the price of breach, the stronger the promisor’s commitment to perform. *The third purpose of contract law is to secure optimal commitment to performing.* We will explain this proposition at length.

1. Perfect Expectation Damages The parties to a contract sometimes take a short-sighted view of their self-interest. For example, traveling carnivals and used-car salespersons deal sharply with customers. Similarly, homeowners and buyers often deal sharply with each other in real-estate transactions. In general, one-time transactions and large stakes cause sharp dealing. In one-time transactions with large stakes, the promisor may show little regard for the loss that breach imposes on the promisee. Indeed, the promisor’s concern with breach may not go beyond his or her liability. If liability is the promisor’s only concern about breach, he or she will perform when it costs less than the liability for breach and will breach when performing costs more than the liability for breach. The following formula summarizes these facts:

\[
\text{actual performance and breach by self-interested, short-sighted promisor}
\]

\[\frac{\text{promisor's cost of performing}}{\text{promisor's liability for breaching}}\] breach;
\[\frac{\text{promisor's cost of performing}}{\text{promisor's liability for breaching}}\] perform.

We have been discussing the promisor’s actual commitment to perform. Now we turn from the actual to the ideal. Efficiency requires maximizing the sum of the payoffs to the promisor and promisee. Performing a promise benefits the promisee and costs the promisor. Thus, efficiency requires the promisor to perform when his or her costs are less than the promisee’s benefits, and efficiency requires the promisor to breach when the opposite is true. The following formula summarizes these facts:

\[\text{optimal performance and breach}
\]

\[\frac{\text{promisor's cost of performing}}{\text{promisee's benefit from performing}}\] efficient to breach;
\[\frac{\text{promisor's cost of performing}}{\text{promisee's benefit from performing}}\] efficient to perform.

Comparing the two preceding formulas reveals the remedy that promotes efficient performance and breach. The promisor faces incentives to behave efficiently
when actual performance aligns with efficient performance as indicated by the formulas. Comparing the formulas in the two preceding boxes, we see that they are equivalent when the promisee’s benefit from performance equals the promisor’s liability for breach. In other words, \textit{the promisor has efficient incentives for performance and breach when the liability for breach equals the benefit foregone by the promisee.}

We can restate this proposition in several different ways. Notice that when the promisor’s liability equals the benefit foregone by the promisee, the promisor internalizes the costs of breach. Consequently, the \textit{promisor has efficient incentives to perform when liability internalizes the costs of breach}. This restatement draws attention to an implicit assumption in our discussion. The implicit assumption is that liability encompasses all the costs that the promisor’s breach imposes upon others. The next chapter discusses some costs of breach that liability may not encompass.\footnote{Liability typically excludes two significant costs: (1) the promisee’s litigation costs, and (2) the costs of breach imposed upon third parties (i.e., people other than the promisor and promisee).}

As mentioned above, the law frequently awards “expectation damages” as compensation for breach. \textit{Perfect} expectation damages restore the promisee to the position that he or she would have enjoyed if the promise had been kept. In other words, perfect expectation damages equal the benefit foregone by the promisee as a result of breach. To illustrate, the first player in Figure 6.2 receives the same payoffs regardless of whether the second player performs or breaches, so Figure 6.2 embodies the assumption that the victim of breach receives perfect expectation damages. Perfect expectation damages cause the promisor to internalize the costs of breach. Consequently, \textit{perfect expectation damages create incentives for efficient performance and breach.}

The promise commits the promisor to perform. The higher the cost of liability, the stronger the commitment to perform created by the promise. When liability is set at the efficient level, the promisor will perform if performance is more efficient than breaching, and the promisor will breach if breaching is more efficient than performing. Consequently, \textit{perfect expectation damages elicit efficient commitment from the promisor to perform.}

2. \textbf{Optimal Performance: An Example} To illustrate optimal commitment, we construct an example in which performing is sometimes more efficient than breaching, and breaching is sometimes more efficient than performing. Promising precedes performing. The gap in time may create uncertainties over the cost of performing. To illustrate, the second player in the game may not know whether urgent business will arise after giving the promise. If urgent business arises, the cost of performing will be high. The cost will be high because performing uses scarce resources required elsewhere. In these circumstances, the high cost of performing may exceed the benefit.

Alternatively, if the second player has no pressing business, the cost of performing may be low. The cost may be low because performing uses surplus
resources not required elsewhere. In these circumstances, the benefit of performing may exceed its low cost. In general, variations in the opportunity cost of resources affect the cost of performing.

We modify Figure 6.1 to represent variations in the cost of performing. Figure 6.1 implicitly assumes that cooperating costs the second player zero. If the cost of cooperating equals zero, then the payoff of cooperation equals .5 for the first player and .5 for the second player, as in Figure 6.1. Now consider the possibility that the cost of cooperating equals 1.5. If the cost of cooperating equals 1.5, then the payoff of cooperation equals .5 for the first player and .5 \(- 1.5 = -1.0\) for the second player.

The payoffs are summarized in Figure 6.3 when cooperating sometimes costs the second player zero and sometimes costs 1.5. The first column indicates the payoffs when cooperation costs are zero. This column is identical to the first column in Figure 6.1. The second column indicates payoffs when cooperation costs 1.5. The second column represents an addition to Figure 6.1. The third column indicates the payoffs from appropriation. The third column is identical to the second column of Figure 6.1. Like Figure 6.1, the payoffs in Figure 6.3 assume no enforceable contract between the parties.

In Figures 6.1 and 6.2, performing is always more efficient than breaching. In Figure 6.3, breaching is sometimes more efficient than performing. Efficiency requires the players to choose the actions that maximize the sum of the payoffs to the first player and the second player. The sum of the payoffs is found by adding the two numbers in each cell in Figure 6.3. When the cost of performing equals 1.5, the sum of the payoffs to cooperation equals .5 \(- 1.0 = -0.5\). Consequently, cooperating is inefficient. In contrast, appropriation always yields the sum of payoffs equal to zero. When cooperating costs 1.5, it would be more efficient to appropriate than to cooperate. Efficiency requires the second player to cooperate when it costs zero, whereas efficiency requires the second player to appropriate when cooperation costs 1.5.

Now consider whether players act efficiently when pursuing their private advantage. If the first player invests, then the second player receives more from appropriating than cooperating. Consequently, the second player’s best move is to appropriate. The first player may anticipate that the second player will appropriate. Consequently, the first player’s best move is “don’t invest.” Thus, the solution

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**Figure 6.3**

*Agency game with variable cooperation costs and without contract.*

<table>
<thead>
<tr>
<th>First player</th>
<th>Cooperate (costs 0)</th>
<th>Cooperate (costs 1.5)</th>
<th>Appropriate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invest</td>
<td>.5</td>
<td>.5 - 1.0</td>
<td>-1.0</td>
</tr>
<tr>
<td>Don’t invest</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

---
to the agency game in Figure 6.3 is “don’t invest.” As in Figure 6.1, the absence of an enforceable contract in Figure 6.3 prevents the parties from cooperating.

Consider the change in Figure 6.3 caused by an enforceable contract. Assume that the second player promises to cooperate and the promise is enforceable. Also assume that the first player receives perfect expectation damages if he or she invests and the second player breaches. Figure 6.4 illustrates the payoffs with an enforceable contract and perfect expectation damages for breach. The first player’s payoff from investing equals .5, regardless of whether the second player performs or breaches. In contrast, the first player’s payoff equals zero if he or she does not invest. Consequently, the best move for the first player is to invest.

Now consider the best strategy for the second player as depicted in Figure 6.4. The second player must promise to cooperate in order to induce the first player to invest. Let us consider the second player’s payoff when he or she makes an enforceable promise. If the second player performs, the payoffs are the same with an enforceable contract as without one. Consequently, the second player’s payoffs are the same in the first two columns of Figure 6.3 and in Figure 6.4. If the cost of performing equals zero, performing yields a net payoff of .5 to the second player. If the cost of performing equals 1.5, performing yields a net payoff of –1.0. Now consider breach. If the second player breaches, his or her payoff is the same as indicated for breach in Figure 6.2, specifically –.5.

Comparing the payoffs reveals that the best strategy for the second player who makes an enforceable promise is to perform when it costs zero and breach when it costs 1.5. We explained previously that efficiency requires the second player to perform when it costs zero and to breach when it costs 1.5. Thus, we have demonstrated that perfect expectation damages typically provide incentives for efficient performance and breach.

Expectation damages are the most common remedy for breach of contract in the United States. However, the actual remedy typically differs from the ideal remedy. In other words, expectation damages actually awarded by courts are typically imperfect. The imperfections are caused by practical difficulties, especially the difficulty courts have obtaining accurate information. For example, foregone profits may be difficult to estimate. Sometimes practical difficulties cause courts to abandon expectation damages and give alternative remedies, as we will explain in the next chapter.
Suppose the promisor and the promisee want the contract to specify the remedy for breach. Would they typically prefer the contract to specify perfect expectation damages, or would they typically prefer an alternative remedy? As explained, perfect expectation damages induce efficient commitment to performance and breach. Efficient commitment maximizes the surplus from the contract, which the parties can divide between them. Consequently, both parties to a contract typically benefit from having perfect expectation damages as the remedy for breach, rather than having an alternative remedy. By awarding expectation damages, the courts typically give the parties the remedy that both of them preferred when making the contract.

In general, the best damage measure creates an efficient level of commitment to performance by the promisor, whereas the wrong damage measure creates an inefficient level of commitment. Damages below the best level cause the promisor to breach too often, which makes the promisee reluctant to make a contract. Damages above the best level require the promisor to perform when it is too costly, which makes the promisor reluctant to make a contract. We will demonstrate these facts in a formal model in the next chapter.

**QUESTION 6.8:** Assume that the high costs of performing cause the promisor to breach a contract and pay perfect expectation damages to the promisee. Would the promisee have preferred that the promisor perform?

**QUESTION 6.9:** Explain the gain in total payoffs from allowing the promisor to breach and pay expectation damages when performing is efficient.

**D. Reliance**

We have explained that the enforceability of contracts enables the parties to cooperate, which typically involves two kinds of behavior. First, the promisor invests in performing. To illustrate, recall the rich uncle’s promise to give his nephew a trip around the world. The uncle must prepare to perform by liquidating some assets to obtain money for his nephew’s trip. Second, the promisee invests in reliance upon the promise. To illustrate using our example, the nephew must prepare for the trip by making some purchases needed for the journey. Perhaps the nephew will buy luggage, snowshoes, a pith helmet, etc. Or consider the example of the farmer who mails money to purchase a “grasshopper killer.” The farmer may expand his barn in anticipation of the need to store more crops. In general, the promisor invests in performing and the promisee invests in relying. Investment may take the form of money, time, effort, or foregone opportunities.

Reliance is a change in the promisee’s position induced by the promise. The change in the promisee’s position increases the value of performance to the promisee. For example, the trip around the world is more valuable to the nephew if he has purchased the items needed for the trip, and a “sure means to kill grasshoppers” is more valuable to the farmer if he has a larger barn to store the additional crops. However, the increase in the value of performance comes at a price. Reliance
typically makes breach more costly to the promisee. For example, if the nephew relies on his uncle’s promise by purchasing items needed for a trip around the world, and if the uncle breaks his promise, then the nephew will lose money when he tries to resell the items that he bought for the trip. Similarly, the farmer will have expanded his barn unnecessarily if the “sure means to kill grasshoppers” fails. Think of reliance on a promise as a gamble that increases the gain from performance and the loss from breach. The fourth purpose of contract law is to secure optimal reliance.

1. Optimal Reliance

How much reliance is optimal? The expected gain from additional reliance equals the increase in the value of performance to the promisee multiplied by the probability of performance. For example, assume the nephew responds to the uncle’s promise of a trip around the world by buying a pith helmet for the tropics. The expected gain to the nephew from buying that helmet might equal the probability that his uncle keeps his promise to give him the trip multiplied by the increase in the value he places on traveling to the tropics with a pith helmet. The expected loss from additional reliance equals the increase in the loss from breach to the promisee multiplied by the probability of nonperformance. For example, the expected loss to the nephew from buying a pith helmet equals the probability that his uncle breaches his promise multiplied by the loss when he resells the pith helmet. Efficiency requires more reliance if the expected gain exceeds the expected loss. Conversely, efficiency requires less reliance if the expected loss exceeds the expected gain.

\[
\left( \frac{\text{probability of promisor’s performing}}{\text{promisor’s performing} } \right) \times \left( \frac{\text{increase in the value of performance caused}}{\text{by additional reliance} } \right) \geq \left( \frac{\text{cost of additional reliance}}{\text{additional reliance} } \right)
\]

\Rightarrow \text{(efficient to rely more).}

2. Optimal Reliance An Example

We return to the agency game to provide a numerical example of optimal reliance. As before, we first describe the payoffs without an enforceable contract, and subsequently we show the change caused by an enforceable contract. Figure 6.5 depicts the payoffs for reliance without an enforceable contract. Assume that the second player promises to perform if the first player will invest. The first player invests and, after investing, the first player subsequently relies. The first player can choose between low reliance and high reliance. The first row of Figure 6.5 depicts the payoffs, given low reliance by the first player. The second row of Figure 6.5 depicts the payoffs, given high reliance by the first player.

As before, performance costs the second player zero or 1.5. The second player performs when doing so costs zero and breaches when performing costs 1.5. The northwest cell of Figure 6.5 depicts the payoffs given low reliance by the first player and performance by the second player. The northeast cell of Figure 6.5 depicts the payoffs given low reliance by the first player and breach by the second player.
If the first player relies at the high level, he or she invests an additional 1.0. This investment increases the value of performance to the first player from .5 to .6, as indicated in the southwest cell of Figure 6.5. However, the first player loses the investment in reliance if the second player breaches. Consequently, the first player’s payoff from breach falls to $-2.0$, as indicated by the southeast cell in Figure 6.5.

Efficiency requires maximizing the payoffs to both players. The payoff to both players equals the sum of the two numbers in each cell of Figure 6.5. If the second player were certain to perform, then efficiency would require high reliance by the first player. If the second player were likely to breach, then efficiency would require low reliance by the second player. Optimal reliance is high when performance is certain, and optimal reliance is low when performance is uncertain.

As the probability of performance increases, a “tipping point” is reached where optimal reliance changes from low to high. Let us calculate the tipping point. Let $p$ denote the probability of performance. The expected net payoff from low reliance equals

$$p(0.5 + 0.5) + (1 - p)(-1.0 + 1.0)$$

expected joint gain from performance + expected joint loss from breach

The expected net payoff from high reliance equals

$$p(0.6 + 0.5) + (1 - p)(-2.0 + 1.0)$$

expected joint gain from performance + expected joint loss from breach

The tipping point, denoted $p^*$, is the value of $p$ where the expected net payoff from high reliance equals the expected net payoff from low reliance.

$$p^*(0.5 + 0.5) + (1 - p^*)(-1.0 + 1.0) = p^*(0.6 + 0.5) + (1 - p^*)(-2.0 + 1.0)$$

$$\Rightarrow p^* = 0.91.$$
Thus, high reliance is optimal if the probability of performance exceeds 91%, whereas low reliance is optimal if the probability of breach exceeds .09.

3. Legal Incentives for Reliance  Having already explained how contract law induces optimal commitment to perform, we now explain how contract law induces optimal reliance. (The next chapter contains a more detailed explanation.) To appreciate the problem of reliance, consider why simple expectation damages for breach of contract can cause excessive reliance. The simple remedy sets damages equal to the promisee’s expected gain from performance, given the promisee’s actual level of reliance, regardless of whether it is high or low. In effect, simple expectation damages remove all the risk from reliance, so the promisee always relies to the full extent, even when efficiency requires restraining reliance.

To illustrate this problem, we modify Figure 6.5, which depicts the payoffs without an enforceable contract, to produce Figure 6.6, which depicts the payoffs to the parties with an enforceable contract and simple expectation damages. To understand Figure 6.6, first consider low reliance, which implies that the first player invests 1 and expects to get back 1.5, for a net gain of .5. If the second player breaches, then the second player must return 1 and also pay an additional .5, as indicated in the first row of numbers in Figure 6.6. Next consider high reliance, which implies that the first player invests 1 and relies 1, and the first player expects to recover 2 and also gain an additional .6. If the second player breaches, then simple expectation damages requires the second player to return 1 and also pay an additional 1.6, as indicated in the second row of numbers in Figure 6.6.

In Figure 6.6, the first player receives a payoff of .5 from low reliance and a payoff of .6 from high reliance. Simple reliance damages thus create an incentive to rely at the high level regardless of the probability of breach. We already demonstrated that when the probability of breach exceeds .09, optimal reliance is low. Thus, whenever the probability of breach exceeds .09 in this example, the remedy of simple expectation damages provides incentives for overreliance.

A more sophisticated measure of expectation damages can overcome this incentive problem. Instead of taking actual reliance as the baseline for expectation damages, the sophisticated measure takes optimal reliance as the baseline.
Sophisticated expectation damages equal the gain the promisee would have obtained from performance given optimal reliance.

Figure 6.7, which assumes that the probability of breach exceeds .09 and hence low reliance is optimal, illustrates sophisticated expectation damages. If the first player relies at the low level and the second player breaches, then the second player must return the investment of 1 and also pay an additional .5, as indicated in the first row of numbers in Figure 6.7. Under the sophisticated damage remedy, the obligations of the second player remain unchanged even if the first player relieves at the high level. If the first player relies at the high level, the first player invests 1 and relies 1. If the second player breaches, the first player thus loses 2. Under the sophisticated remedy, however, the first player receives compensation of 1.5. As a result, high reliance and breach results in a net loss of 2.5 to the first player, as indicated in the second row of numbers in Figure 6.7.

In Figure 6.7 the first player receives a payoff of .5 from low reliance. For high reliance, the first player receives a payoff of .6 for performance and a loss of 2.5 for breach. Thus, if breach is likely, the first player has an incentive for low reliance, and if performance is likely, the first player has an incentive for high reliance. It is not hard to show that the first player maximizes his expected payoff by shifting from low reliance to high reliance as the probability of breach falls below .09. Thus, sophisticated expectation damages create incentives for optimal reliance.

As defined earlier, perfect expectation damages restore the promisee to the position that he would have enjoyed if the promise had been kept. That position depends upon the extent of the promisee’s reliance. For the sake of economic efficiency, the promisee’s reliance should be optimal. We incorporate this fact into our definition of perfect expectation damages. By definition, perfect expectation damages equal the damages needed to restore the promisee who relied optimally to the position that he would have enjoyed if the promise had been kept.

Overreliance causes excessive harm from breach. The law can discourage overreliance by limiting recoverable damages. If courts award perfect expectation damages as defined here, the victims of breach receive no compensation for overreliance. Because the ideal law compensates the victim of breach only for actual losses up to a maximum equal to the loss from optimal reliance, the victim must
bear any additional losses caused by overreliance. Consequently, the promisee has a strong incentive to avoid overrelying.

Various legal doctrines define overreliance. An important doctrine in common law concerns foreseeability. Reliance by the promisee is foreseeable by the promisor if it equals the amount that the promisor could reasonably expect under the circumstances. Reliance by the promisee is unforeseeable if it exceeds the amount that the promisor could reasonably expect under the circumstances. Anglo-American law defines overreliance as unforeseeable, and, consequently, noncompensable.8

To illustrate the definition of overreliance as unforeseeable reliance, assume that a telegraph company fails to transmit a telegram containing a “sell” order by a stockbroker. With so much at stake, the stockbroker should have relied less on this telegram. For example, the stockbroker should have asked the recipient to immediately acknowledge receipt of the telegram. The telegraph company could not foresee the stockbroker’s failure to take reasonable precautions. Consequently, the telegraph company could not foresee several million dollars in losses from failing to transmit this one telegram.

As another example, suppose that the nephew prepares for his world tour by buying a white silk suit for the tropics and a matching diamond belt buckle. When his uncle refuses to pay for the world tour, the nephew resells the silk suit and the matching diamond belt buckle at a loss. The nephew subsequently sues his uncle for the difference between the purchase price and the resale price. The court might find that the uncle should have foreseen that his promise would cause his nephew to purchase a silk suit for the tropics. The court might also find that the uncle could not foresee that his promise would cause his nephew to buy a diamond belt buckle. The court might make the uncle compensate the nephew for the difference between the purchase price and the resale price of the silk suit, whereas the court might make the nephew bear the loss from reselling the diamond belt buckle.9

**QUESTION 6.10:** Explain why compensating the victim of breach for expectation damages causes efficient performance and breach, whereas compensating the victim of breach for excessive reliance may cause inefficient performance and breach.

**QUESTION 6.11:** Suppose that the stockbroker told the telegraph company that failure to transmit the telegram could cause millions of dollars in losses. This is called “giving notice.” Are the actual losses now foreseeable by the telegraph company? (The next chapter discusses how “giving notice” affects liability for breach in common law.)

### E. Default Rules and Transaction Costs

Contracts often involve risks. To illustrate, suppose that the McGuire family signs a contract with the Wabash Construction Company to build a house. Floor

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8 See the discussion of Hadley v. Baxendale in the next chapter.

9 In American law, gift promises are usually enforceable to the extent of reasonable reliance.
plan, construction materials, style of carpets, landscaping, compliance with zoning codes—all of this and more is specified, as well as the price to be paid and the date for completing the house. Now imagine some of the things that can go wrong. A strike by the suppliers of hardwood flooring could delay the whole project. War in a remote country may cause the cost of copper pipe to soar. Zoning officials in the local government might reject the landscaping plans. A suit by an injured employee might bankrupt Wabash. Mr. McGuire might die, in which case the rest of the family might no longer want the house. The McGuires might go bankrupt, in which case they could no longer afford the house.

The contract allocates some of these risks explicitly. For example, the contract may stipulate that the completion date will be deferred in the event of a crippling strike. On the other hand, the contract may remain silent about many risks. For example, the contract may say nothing about who bears the risk that zoning officials reject the landscaping plans. Real contracts suffer from gaps. When a contract remains silent about a risk, the contract has a “gap.” Gaps are events not explicitly addressed in the contract that affect obligations created by it.

Gaps may be inadvertent. To illustrate, assume that a contract says nothing about the possibility that a hijacking closes an airport and prevents the seller from delivering goods on time. The parties may leave this gap in the contract inadvertently because they do not foresee the possibility of a hijacking. Alternatively, gaps may be deliberate. To illustrate, a contract may say nothing about the possibility that a wildcat strike prevents the manufacturer from producing the promised goods. The parties may leave this gap in the contract deliberately because they believe that the possibility of a wildcat strike is remote. Remote risks do not justify the cost of negotiating and drafting terms to allocate them.

1. **Rational Gaps**

Let us consider the calculations that might lead the parties to leave gaps deliberately in contracts. Return to our example of a crippling strike that could delay construction of the McGuires’ house by the Wabash Construction Company. Negotiating the allocation of this risk imposes transaction costs with certainty when the contract is made. Alternatively, the McGuires and Wabash could leave a gap in their contract and wait to see whether the strike occurs. Leaving a gap in the contract will require the parties to allocate a loss if it materializes.

We describe this trade-off abstractly. “Ex ante risks” refer to the risk of future losses faced by the parties when they negotiate a contract. “Ex post losses” refer to losses that actually materialize after making the contract. In general, the parties to a contract must choose between allocating ex ante risks and allocating ex post losses.

Consider the difference in transaction costs between allocating risks and losses. If the parties negotiate explicit terms to allocate risks, they will bear transaction costs for certain. If they leave a gap, they will bear transaction costs with positive probability. The expected transaction cost of a gap in the contract equals the probability that the loss materializes multiplied by the cost of allocating it. The parties expect to save transaction costs by leaving gaps in contracts whenever the
actual cost of negotiating explicit terms exceeds the expected cost of filling a gap. The following rule summarizes these facts:

\[
\text{minimizing transaction costs of contracts}\\
\text{cost of allocating a risk} > \text{cost of allocating a loss} \\
\times \text{probability of a loss} \Rightarrow \text{leave gap},\\
\text{cost of allocating a risk} < \text{cost of allocating a loss} \\
\times \text{probability of a loss} \Rightarrow \text{fill gap}.
\]

Parties typically reach agreement on allocating a risk more easily than a loss. To see why, return to our example of the risk that a crippling strike will delay construction of the McGuire's house. Negotiating an explicit term in the construction contract to allocate this risk may cost $25. Given an explicit term in the contract, the parties can easily allocate the resulting losses if a crippling strike materializes. Alternatively, the parties can leave a gap in the contract. Given a gap in the contract, the parties will have disagreements and difficulties allocating the losses caused by a crippling strike. Assume that the transaction cost of allocating such losses after they materialize equals $500. The higher cost of allocating losses rather than risks must be discounted by the probability that the loss never materializes. Assume that the probability of a crippling strike equals .04. Thus, the expected transaction cost of leaving a gap in the contract equals $20. In this example, the parties save $5 in expected transaction costs by leaving a gap in the contract.

2. Gap-Filling by Courts Courts need rules to fill gaps in contracts. A theory of contracts should provide guidance to the courts (and through their decisions to private parties and their lawyers) by answering the question “How should courts fill gaps in contracts?” We here and in the following section propose an economic theory of gap-filling. Note that our theory is meant specifically to guide courts on filling gaps that parties have left in their consensual agreements. The overarching reason for courts to fill these gaps is to instruct future contracting parties (and their lawyers) about how they ought negotiate with respect to the gaps they leave in their agreements. This is yet another example of the Normative Coase Theorem, whereby law seeks to induce efficient behavior by lowering transaction costs.

Courts sometimes fill contractual gaps by “imputing” a term to the contract, which means acting as if the parties had negotiated a term that they did not actually negotiate. For example, courts may impute a term excusing nondelivery of certain goods during a war. Alternatively, courts may enforce only the explicit terms in the contract. For example, courts may hold the seller liable for nondelivery of

\[10\]

$500 \times .04 = \$20.$

\[11\]The literature distinguishes between “default rules” and “mandatory rules.” A “default rule” is a rule that is in force but that the parties themselves are free to alter by mutual consent. For example, the law might create a default rule that assigns a particular obligation to the taller of the two contractual parties. By contrast, a “mandatory” rule is one that is in force and cannot be altered by the parties; the rule cannot be waived by one of the parties. For example, contract law contains a mandatory rule against entering into a valid contract with a minor child. We prefer to use the term “regulation” to refer to what the literature frequently refers to as “mandatory rules.”
certain goods during war on the ground that the contract does not name war as an excuse for nonperformance.

Sometimes explicit terms in a contract conflict with the terms that the law would have supplied to fill a gap. To illustrate, consider the contract between the construction company and the McGuires. Assume that the contract explicitly states that the completion date for construction will be extended by the number of days of a crippling strike. If the contract said nothing about crippling strikes, the court would probably hold Wabash responsible for construction delays caused by crippling strikes. Thus, an explicit term in the contract conflicts with the term that the law would supply to fill a gap.

When legal obligations conflict, the law must decide which one prevails. Faced with the conflict in this example, the court will probably extend the construction deadline by the length of the strike, rather than holding Wabash liable for the delay. Explicit terms in a contract usually prevail over the terms that the court would supply to fill a gap. When explicit terms prevail over implicit terms, the implicit terms fill gaps by default, which means “in the absence of explicit terms to the contrary.” Gap-filling terms in contract law are mostly “default terms.”

We already explained that replacing inefficient contract terms with efficient terms creates a surplus. Similarly, replacing inefficient default terms with efficient default terms creates a surplus. It is easy to see why. We already explained that the parties to a contract can often save transaction costs by leaving gaps in it. When they leave a gap, the court fills it with a default term. Efficient default terms maximize the surplus to the parties, whereas inefficient default terms reduce the surplus. In general, both parties to a contract can benefit when lawmakers replace inefficient default terms with efficient default terms.

To illustrate, recall our example in which the McGuires and Wabash can negotiate the allocation of the risk of a crippling strike at a cost of $25, or they can leave a gap in the contract, which causes expected transaction costs of $20. In this example, leaving a gap in the contract saves the parties $5 in expected transaction costs. However, transaction costs are not the only relevant costs. In addition, the parties must consider the cost of bearing the risk of a crippling strike. Assume that Wabash can bear the risk of a crippling strike at a cost of $60, whereas the McGuires can bear the risk at a cost of $20. Thus, an efficient allocation of the risk of a crippling strike saves $40 relative to an inefficient allocation.

Compare the consequences of an efficient default rule and an inefficient default rule. An efficient default rule allocates the risk of a crippling strike to the McGuires. If the actual default rule is the efficient default rule, then the parties can leave a gap in the contract and save $5 in transaction costs. In general, efficient default rules enable the parties to minimize the transaction costs of negotiating contracts by leaving gaps in them.

Alternatively, an inefficient rule allocates the risk of a crippling strike to Wabash. An inefficient default rule presents Wabash and the McGuires with a trade-off. Given the inefficient default rule, leaving a gap in the contract will waste $40 in the cost of risk-bearing. Alternatively, the two parties can negotiate an efficient allocation of risk. Replacing the inefficient default term with an efficient explicit term will save them $40 in the cost of risk-bearing. However, negotiating
a term to fill the gap will cost them an additional $5 in expected transaction costs. In general, inefficient default rules impose a trade-off between transaction costs and risk-bearing.

Both parties prefer that the contrast has efficient terms rather than inefficient terms. Similarly, both parties prefer efficient default terms rather than inefficient default terms. When law supplies default terms preferred by both parties, they can omit these terms from the contract. By omitting these terms from the contract, the parties can focus their negotiations on other terms. The fewer the terms requiring negotiation, the cheaper the contracting process. Thus, the law can save money for contracting parties by supplying efficient default terms to fill gaps in contracts. The fifth purpose of contract law is to minimize transaction costs of negotiating contracts by supplying efficient default terms and regulations.

3. Hypothetical Bargains  

Economic analysis offers a simple rule for courts to follow in order to supply efficient default terms for a contract. Consider the terms the parties would have reached if they had filled the gaps by negotiation. Impute the terms to the contract that the parties would have agreed to if they had bargained over all the relevant risk. To illustrate, suppose that the contract between the McGuires and Wabash remains silent about the risk that the price of copper pipe will soar. According to the preceding principle, the court should allocate the risk as the parties would have done if they had negotiated with each other. Because this rule seeks to impute a gap-filling allocation that the vast majority of contracting parties would prefer, such rules are called “majoritarian” default terms. Note that these terms are not mandatory: the parties may contract around them.

The actual bargain consists in the terms negotiated by the parties. The hypothetical bargain consists in the terms the parties would have reached if they had filled the gaps in the contract by negotiation. The preceding principle requires courts to fill gaps in contracts according to the hypothetical bargain. When courts fill gaps by imputing terms of the hypothetical bargain, the parties receive their preferred contract from the court. Further negotiations between the parties cannot improve upon the allocation of risk by the courts. Consequently, the parties can minimize transaction costs by leaving gaps or filling them, whichever is cheaper.

Implementing the principle of the hypothetical bargain has two aspects. In developing a model of bargaining in Chapter 4, we concluded that agreements reached under zero transaction costs exhaust the surplus from cooperation, as required for efficiency. First, the court in structuring a hypothetical bargain must establish the most efficient form of cooperation. In Chapter 4 we also noted that an equal division of the surplus is reasonable. Second, the court must divide the surplus that cooperation would have achieved. In other words, the court should respond to gaps in the contract by allocating obligations efficiently and adjusting the price reasonably.

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We illustrate this principle using several variations of our example. Assume that when the McGuires and Wabash sign the contract, Wabash knows that the cost of copper pipe in the house may soar by $2000 with probability .5. The increase in costs expected by Wabash is $2000 \times .5 = $1000. Furthermore, assume that Wabash can hedge against this risk for $400. By hedging, Wabash would avoid an expected cost of $1000 at a cost of $400, which yields a surplus of $600.\textsuperscript{13} In contrast, assume that the McGuires could not foresee changes in the price of copper or hedge against them. Consequently, efficiency requires Wabash, not the McGuires, to hedge.

Unfortunately, Wabash does not hedge and the price of copper soars. Wabash completes constructing the house and sends the McGuires a bill for an additional $2000. The McGuires refuse to pay, and Wabash sues them. The actual contract is silent about the risk of soaring copper prices.

Consider how the court could resolve the case by imputing the hypothetical contract that the parties would have reached under zero transaction costs. Creating the hypothetical contract involves two steps. First, the court must establish who could bear the risk of soaring copper prices at least cost. In this example, Wabash is the more efficient risk-bearer. Consequently, the court concludes that the ideal contract would allocate the risk of soaring copper prices to Wabash, as required for efficiency.

Second, the court must consider adjusting the price of the contract to reflect the efficient allocation of risk. Constructing houses generally involves many risks that builders routinely foresee and assume as an unstated part of the contract, including the risk of price increases for construction materials. Because Wabash foresaw the risk, Wabash ought to have negotiated a price that included compensation for bearing the risk. Any failure to negotiate such a price is Wabash’s fault. The court will conclude that Wabash was responsible for seeing that the contract price already included compensation for bearing the risk of soaring copper prices, so the McGuires owe Wabash zero damages.

In general, imputing terms to a contract involves a detailed inquiry into the customs of the trade and the information known to the parties. When the efficient risk-bearer actually foresaw the risk, or ought to have foreseen the risk, the court should presume that the negotiated price included compensation for bearing the risk. Whether Wabash actually foresaw the risk in this case is a question of fact, and whether Wabash ought to have foreseen the risk is a question of good business practices.

Sometimes, however, neither party to a contract foresees a risk and neither party ought to have foreseen it. To illustrate, assume that subterranean politics in the copper worker’s union in a distant country cause a strike that inflates the price of copper. Neither Wabash nor the McGuires ought to foresee such an obscure event. In these circumstances, the law must allocate an unforeseen loss between blameless parties.

Once again, the law can take the ideal contract as a guide. The ideal contract allocates the risk of unforeseeable losses to the more efficient risk-bearer. In this

\textsuperscript{13}$2000 \times .5 - $400 = $600
example, Wabash can respond to unforeseeable changes in the price of building materials and minimize the damage. Wabash is apparently the more efficient risk bearer because, perhaps, they have much more experience with risk than do the McGuires. So the court might find that Wabash must bear this risk. However, the court might also find that the actual contract price did not reflect the risk that Wabash bears. Consequently, the court might adjust the price to reasonably reflect the risk.14

Consider another variation on this example. Promisors often perform late. Sometimes contracts stipulate damages for later performance, such as $100 per day. However, many contracts remain silent about late performance. When the contract remains silent, the court must determine damages for late performance. To illustrate, assume that Wabash promises to complete the house for occupancy by the McGuires on September 1, but inclement weather in July imposes unavoidable delays. Wabash could continue at the planned pace and finish on October 1, or it could accelerate work during August and complete the construction on September 1 as promised. Accelerating the work in August costs an additional $2000. The McGuires rent a house for $1000 per month during the construction of the new house. The contract is silent about damages for late performance. Wabash decides to proceed at the usual pace, completes construction on October 1, and offers to pay the McGuires $1000 in damages to cover rental costs, plus an additional $500 for settling the dispute.

Unknown to Wabash, the McGuires invited their relatives to a reunion on September 15. The new house would have accommodated the relatives. Instead of accommodating their relatives in the new house, the McGuires spent $1500 on hotel bills. The McGuires ask the court to award compensation of $2500 for rent and the relatives’ hotel bills.

How would the ideal contract allocate the risk of late performance? As explained, accelerated work would save $2500 at a cost of $2000, thus creating a net benefit of $500. Wabash did not know this. Instead, Wabash believed that accelerated work would save $1500 at a cost of $2000, thus creating a net cost of $500. In order to behave efficiently, Wabash needed to know about the unusual losses from delay. The McGuires failed to provide the information to Wabash. Efficient contracts typically allocate losses caused by someone’s fault to the party at fault. In this case, the fault of the McGuires caused losses of $500. The efficient default contract would apparently hold Wabash liable for damages of $1500 and the McGuires would bear the additional losses of $1000.

This example illustrates overreliance by the McGuires. Wabash reasonably expected a low level of reliance by the McGuires. In fact, the McGuires relied at a high level. Furthermore, the McGuires failed to give notice of their high level of

14 Assume that if Wabash had foreseen the risk, it would have charged an extra $700 to bear it. Thus, the ideal contract would have allocated the risk of losing $2000 to Wabash at a price of $700 to the McGuires. Following the ideal contract, the court will enter a judgment of $700 in favor of Wabash and against the McGuires. The McGuires lose $700. Wabash gains $700 from the court and loses $2000 in additional costs of copper pipe, for a net loss equal to $1300. Thus, the $2000 loss has been divided between the parties as if the actual contract were ideal.
reliance to Wabash. Consequently, the McGuires must bear the increase in the cost of breach caused by overreliance. This prescription corresponds to an important rule of common law. The rule holds that the promisor must bear the usual costs of breach ("reasonably expected costs of breach"), whereas the promisee must bear the unusual costs of breach ("unforeseeable costs of breach"), unless the promisee notified the promisor about the unusual costs of breach.15

**QUESTION 6.12:** “Default rules save transaction costs in direct proportion to their efficiency.” Explain this proposition.

**QUESTION 6.13:** Suppose that Wabash completes the house one month later than promised. Inclement weather, which was no one’s fault, caused the tardiness. Explain how the court might compute efficient damages.

**QUESTION 6.14:** Some gaps in contracts are the fault of one of the parties. To illustrate, assume that one party to a contract has private information about a significant risk. Efficiency may require the party with private information to initiate negotiations to allocate risk. Failing to initiate negotiations leaves a gap in the contract. If the risk materializes, the courts may allocate liability for the loss to the party with private information. In this case, liability can be regarded as a penalty for fault. Consequently, such allocations of liability are called penalty default rules.16 The preceding section discusses an example in which the McGuires failed to disclose their unforeseeable reliance on Wabash's promise to complete construction of the house by September 1. Explain why the common law legal rule applied to this case can be regarded as a penalty default rule.

**QUESTION 6.15:** Finally, doctors who form a partnership may say nothing in the partnership agreement concerning its future dissolution. The parties may deliberately avoid discussing dissolution for fear of breeding distrust. Provide some other examples of gaps left in contracts for strategic reasons.

**F. Perfect Contracts and Market Failures**

We have discussed enforcing terms that are not explicitly in a contract (default terms). Now we discuss not enforcing terms that are explicitly in a contract. Besides gaps, real contracts sometimes contain explicit terms that seem inappropriate

15This is the rule from **Hadley v. Baxendale**, 9 EXCH. 341 (1854).
16See Ian Ayres and Robert Gertner, **Filling Gaps in Incomplete Contracts: An Economic Theory of Default Rules**, 99 YALE L. J. 87 (1989). Ayres and Gertner give, as an example of a penalty default, the provision in the **Uniform Commercial Code** that voids a contract for the sale of goods in which the parties fail to specify a quantity term. Contrast this provision with the one that has a court impute a reasonable price term in contracts for the sale of goods in which the parties fail to specify a price term. Explain this difference.
to events as they actually unfold. Sometimes the court sets aside the explicit terms of a contract. For example, the court may disregard the terms of a contract by which a consumer waives the right to recover for injuries caused by a defective product. Sometimes the court supplies terms to replace the contract's explicit terms. For example, when a child below the age of legal competence signs a contract, the court may replace the actual terms with its own, new terms or void the contract.

When the law disregards or changes the terms in a contract, we say that law regulates the contract. Unlike default rules, regulations are mandatory rules. Regulating contracts resembles regulating markets. In both cases, the state deflects a private transaction from its course. Furthermore, the economic rationale for regulating contracts resembles the economic rationale for regulating markets. The economic rationale for regulating markets begins with a description of a perfectly competitive market, which requires no regulation. Next, the theory describes the ways that actual markets depart from this ideal, or the forms of market failure. We will adapt this approach to contracts.

To develop the theory of market failures, imagine that the parties to a deferred transaction draft a perfect contract. A perfect contract is complete. Every contingency is anticipated; the associated risk is efficiently allocated between the parties; all relevant information has been communicated; nothing can go wrong. A perfect contract is also efficient. Each resource is allocated to the party who values it the most; each risk is allocated to the party who can bear it at least cost; and the terms of the contract exhaust the possibilities for mutual gain by cooperation between the parties.

If the parties have negotiated a perfect contract, then the contract has no gaps, so the parties do not need the court to supply default terms. If the parties have negotiated a perfect contract, then the contract has no failures, so the parties do not need the court to regulate its terms. We conclude that the parties to a perfect contract need the state to enforce their agreement according to its terms, but nothing more is required of the state.

Under what circumstances will parties negotiate a perfect contract? The circumstances are already familiar to you from our discussion of the Coase Theorem in Chapter 4. According to the Coase Theorem, rational parties will craft a perfect contract when transaction costs are zero. When transaction costs are zero, the contract will be complete, because negotiating additional terms costs nothing. When transaction costs are zero, the contract will be efficient, because each right is allocated to the party who values it the most and each risk is allocated to the party who can bear it at least cost. Given a perfect contract, state regulation that discards or modifies its terms will create inefficiencies. In general, regulation of contract terms negotiated by rational people under zero transaction costs causes inefficiency.

Conversely, contracts are imperfect when the parties are irrational or transaction costs are positive. We will add some more detail to this proposition by developing the theory of market failures. We will then use that theory to classify the regulations of contract according to the market failure that they ideally correct.
1. Individual Rationality  In our review of microeconomics in Chapter 2, we identified three assumptions about rational choice by individuals. First, a rational decision-maker can rank outcomes in order from least preferred to most preferred. In order to rank outcomes, decision-makers must have stable preferences. If the promisor’s preferences are sufficiently unstable or disorderly, then he or she is legally incompetent and cannot conclude an enforceable contract. For example, children and the insane are legally incompetent.

Second, the rational decision-makers’ opportunities are moderately constrained so that they can achieve some, but not all, of their objectives. Dire constraints destroy freedom of action. Two major contract doctrines excuse promise-breaking on the ground that the promisor faced dire constraints: duress and necessity. If the beneficiary of the promise extracted it by threats, then promise-breaking is excused by reason of duress. For example, in a famous movie the “godfather” of a criminal syndicate makes contract offers that “cannot be refused” because the victim signs the contract with a gun held to his head. No court would enforce such a contract.

Similarly, if a promise is extracted from a desperate promisor, the court may excuse nonperformance on the ground of necessity. For example, suppose a surgeon runs out of gas on a lonely desert road where she might perish. A passerby offers to sell her five liters of gas for $50,000. Even if the surgeon accepts the offer, the court will not enforce her promise to pay. The court will not enforce the promise because it was given out of necessity.

Notice that duress and necessity both apply when the promisor is in dire circumstances, but the cause is different. The cause of necessity is usually the promisor’s bad judgment, bad luck, or a third person. For example, the surgeon may have run out of gas in the desert because she did not check the gas gauge, a hidden defect caused the gas gauge to fail, or her enemy secretly punctured the gas tank. In contrast, the cause of duress is usually the promisee. For example, the godfather held the gun to the promisor’s head. Thus, duress can be regarded as necessity caused by the promisee.

In these examples, the dire constraint preceded the promise. Sometimes a dire constraint follows the promise. A dire constraint that follows a promise can prevent the promisor from performing. For example, a surgeon may promise to operate and then break her hand before the scheduled operation. If a promise is made in good faith and fate intervenes to make performance impossible, then promise-breaking may be excused by reason of impossibility. For example, a manufacturer may be excused from fulfilling his contracts because his factory burned down. In general, the impossibility doctrine applies to unlikely events that prevent performance. In the next chapter we discuss the optimal allocation of the risk of such events.

WEB NOTE 6.1: There has been a great deal of interesting and important recent scholarly literature on deviations from individual rationality. See our website for a discussion of some of that literature as it applies to the theory of contracts.
2. Transaction Costs

Now we turn from rationality to transaction costs. Making a contract involves searching for partners, negotiating terms, drafting the contract, and enforcing it. Searching takes effort; negotiating takes time; drafting takes expertise; and enforcing takes perseverance. In many contracts, these transaction costs are small relative to the surplus from cooperation. In other cases, however, these transaction costs are large relative to the surplus from cooperation. Indeed, sometimes these transaction costs are large enough relative to the surplus to preclude cooperation. We will distinguish three kinds of obstacles to efficiency that arise when transaction costs obstruct bargaining.

a. Spillovers

Sometimes transaction costs prevent people from participating in negotiations that affect them. To illustrate, if an electric utility generates power by a dirty process, such as burning soft coal, then the production of power may affect others adversely. Alternatively, if the utility generates power by a clean process, such as burning natural gas, then the production will not directly affect third parties. Thus, a contract to supply electricity may have third-party effects, depending upon whether the electricity is generated by a clean process or a dirty process.

We have already discussed such spillovers under the name *externalities*. External costs cause the individual’s self-interest to diverge from social efficiency. The divergence from social efficiency creates scope for corrective legal action. Although contracts often have external effects, the legal remedy seldom involves *contract* law. In most cases, the plaintiff in a suit for breach of contract must be the person to whom the promise was made (the promisee) or the person to whom the promisee’s rights were transferred (the transferee). A third party is, by definition, not the promisee or transferee. Third parties who allege that a contract harmed them cannot find relief in contract law except under special circumstances. Contract law proceeds on the assumption that other branches of law will protect third parties. Instead of suing for relief under contract law, third parties must usually seek relief under the law of torts, property, crimes, or regulations. For example, a contract to purchase goods from a polluting manufacturer causes more pollution, but the victims of pollution cannot sue under contract law. Instead, the victims must sue under nuisance law or under an environmental regulation.

Sometimes contract law protects third parties by refusing to enforce a contract between the first and second party. The courts may refuse to enforce such a contract when it *derogates public policy*. To illustrate, companies often wish to make contracts not to compete with each other. Agreements not to compete enable

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17Thus, an heir can usually sue for breach of promise made to the deceased. Similarly, when one firm takes over another, the acquiring firm can usually sue for breach of a promise made to the acquired firm by other parties.

18Contracts often create relationships out of which duties arise to third parties. For example, the director of a corporation has a fiduciary duty to stockholders that prevents him or her from entering certain kinds of contracts. Sometimes it is unclear whether duties that arise out of contractual relationships should be classed as contractual duties. Furthermore, many countries in Europe impose strict liability for consumer accidents on the basis of implied warranties, whereas the Anglo-American tradition achieves the same result through tort law.
cartels to exploit buyers by charging monopoly prices. Courts in England and America were reluctant to enforce 19th century contracts to create cartels. Such contracts derogated public policy. Subsequent antitrust statutes outlawed cartels, in the United States and the nations of Western Europe. For example, contracts to create a cartel are void in Europe by the law of the European Union (European Union Treaty, Section 85, paragraph 2).

Similarly, courts are reluctant to enforce contracts that “tie the hands” of parties involved in negotiations. To illustrate, assume that Company A offers to pay its workers $10 per hour, and the union demands $15 per hour. The union threatens to strike Company A and stay on strike until Company A concedes. To make the threat credible, the union signs a contract with Company B promising to work for $1 per hour for Company B if the union ever agrees to work for Company A for less than $15 per hour. The purpose of the contract with Company B is to raise the union’s cost of conceding to Company A. Raising the cost of conceding to Company A precludes the union from making concessions to Company A.

U.S. law imposes a statutory obligation upon the union to “bargain in good faith” with Company A. Because the union’s contract with Company B obstructs bargaining with Company A, the contract between the union and Company B “derogates a statutory duty” that the union owes to Company A. Thus, the contract between the union and Company B is unenforceable.

b. Asymmetric Information  Sometimes one or more of the parties to a contract lacks essential information about it. The lack of information can have several causes. Sometimes people lie or withhold information in order to gain an advantage in bargaining. Sometimes people fail to transmit information to save communication costs. When facts are transmitted, the recipient may not comprehend them.

In general, ignorance is rational when the cost of acquiring information exceeds the expected benefit from being informed. To illustrate, many rational people throw away the finely printed warning on medicine without reading it. One might argue that this is rational because regulations, tort law, and the manufacturer’s desire to maintain a good name make the likelihood of harm from taking the medicine very low. Conversely, ignorance is irrational when the expected benefit from being informed exceeds the cost of acquiring information. To illustrate, some people refuse to write a will or purchase life insurance because they do not want to contemplate death.

We have discussed some causes of uninformed contracts. Now we discuss several doctrines in contract law that excuse promise-breaking on the ground that the promise resulted from bad information: fraud, failure to disclose, frustration of purpose, and mutual mistake.

If the beneficiary of the promise extracted it by lies, then breaking the promise is excused by reason of fraud. For example, the seller of the “sure method to kill grasshoppers” defrauded the farmer. Fraud violates the negative duty not to misinform the other party to a contract. Besides this negative duty, parties sometimes have the positive duty to disclose information. In the civil law tradition, your contract may be void because you did not supply the information that you should
have. Civil law calls this doctrine *culpa in contrahendo*. In most sales contracts, a seller must warn the buyer about hidden dangers associated with the use of the product, even though this information may cause the buyer not to buy it. For example, the manufacturer of a drug must warn the user about side effects. In these circumstances, common law finds a duty to disclose.

Sometimes disguised defects lower the value of a good without making it dangerous or unfit for use. Common law apparently contains no general duty to disclose such disguised defects.\(^{19}\) For example, common law does not require a used-car dealer to disclose the faults in a car offered for sale (only a duty not to lie about those faults). The law is different for new goods, such as new cars, as opposed to used goods, such as used cars. For new goods, U.S. law imputes a "warranty of fitness."\(^{20}\) An "implied warranty" is a guarantee that the court reads into the contract, even though the actual contract did not explicitly contain such a guarantee. According to the implied warranty of fitness, the seller of a new good promises that it is fit to use for its intended purposes. For example, the seller of a new car breaches this warranty and must return the purchase price if a fault in the car’s design prevents its use for transportation. However, the implied warranty of fitness does not apply to using a car as a golf cart or a boat.

If people make contracts premised upon misinformation that they gathered for themselves, then there is no legal principle releasing them from their contractual duties. For example, a stock trader who promises to supply 100 shares of Exxon in six months at a predetermined price cannot escape his obligation just because the price of the stock rose when he expected it to fall.

Most of the preceding examples concern contracts in which one party was misinformed and the other party was well-informed. Another possibility is that both parties premise the contract upon the same misinformation. This is the basis of a legal excuse for breaking a promise known as *frustration of purpose*. English law provides some famous examples known as the Coronation Cases. In the early years of the twentieth century, rooms in buildings situated along certain London streets were rented in advance for the day on which the new king’s coronation parade would pass by. However, the heir to the throne became ill, and the coronation was postponed. Postponing the parade made the rental agreement worthless to the renter. Some owners of the rented rooms tried to collect the rent anyway. The courts refused to enforce the contracts on the ground that the change in circumstances frustrated the purpose of the contracts.

Yet another possibility is that both parties premise the contract upon different misinformation. If promises are exchanged on the basis of contradictory, but reasonable, conceptions of what is promised, then the contract is said to rest upon what is called a *mutual mistake*. To illustrate using our Example 2, the seller genuinely believed that he was negotiating to sell his rusty Chevrolet in the back yard, and the buyer genuinely believed that she was negotiating to purchase the immaculate Cadillac in the driveway. Like frustration of purpose, mutual mistake

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19 We say "apparently" because the law is not perfectly clear on this point.

justifies the court’s setting the contract aside. In our example, the court might order the buyer to return the car keys, and the seller to return the money.

c. Monopoly  Competitive markets contain enough buyers and sellers that each person has many alternative trading partners. In contrast, oligopoly limits the available trading partners to a small number, and monopoly limits the available trading partners to a single seller. When trading partners are limited, bargains can be very one-sided, in the sense that one side takes advantage of the other. 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 exploitation by monopolies. Most protections against monopolies were supplied by statutes, not by common law.

One of the few historical examples of common law protection against monopoly is the doctrine of necessity, which we discussed above. In recent years, however, a new common law doctrine has evolved that allows judges to scrutinize the substantive terms of contracts. When a contract seems so unfair that its enforcement would violate the conscience of the judge, it may be set aside according to the doctrine of unconscionability. For example, assume a consumer signs a contract allowing a furniture seller to repossess all the furniture in her house if she misses one monthly payment on a single item of furniture. The court may find the repossession term “unconscionable” and refuse to enforce it. We discuss this elusive doctrine in the next chapter. The civil law tradition contains a concept—“lesion”—similar to unconscionability. “Lesion” refers to a contract that is too unequal to have legal force.

It is worth mentioning here, before the more detailed treatment of this issue in the following chapter, that in contract law unconscionability tends to be invoked in circumstances that do not exactly correspond to the traditional economic definition of one seller, with entry barriers preventing others from competing. Rather, the circumstances in which unconscionable terms tend to be imposed or elicited are those that might be characterized as “situational monopolies.” These are special instances in which an unusual set of circumstances have created a situation that, for the people involved and for the time period in which they find themselves, is, for all intents and purposes, a monopoly. We saw such a circumstance in Chapter 5 in the famous case of Ploof v. Putnam. Recall that Mr. Ploof and his family were sailing on a large lake when a storm came up very suddenly, putting them in extreme danger. They made for a pier on a nearby island, but when they tried to tie up to the pier to ride out the storm, Putnam’s servant cast them off. In those particular circumstances Putnam was a monopolist with respect to Ploof’s receiving a safe harbor from the storm. We shall see additional examples of situational monopolies in the following chapter.

Table 6.1 summarizes the connection between rationality, transaction costs, and the regulation of promises by contract law. To help you appreciate Table 6.1, we will summarize its use. Given low transaction costs, rational people will make contracts that approach perfection. A perfect contract has no gaps for courts to fill or inefficiencies for regulations to correct. If a contract approaches perfection, the court should simply enforce its terms. As transaction costs
increase, however, people leave gaps in contracts. Courts should fill the gaps with efficient default terms. Transaction costs can also cause externalities, misinformation, or situational monopolies. Serious imperfections can cause markets to fail and create a need to regulate contracts. The farther the facts depart from the ideal of perfect rationality and zero transaction costs, the stronger the case for judges’ regulating the terms of the contract by law. Table 6.1 associates the leading doctrines for regulating contracts with the market failure that they attempt to correct.

Contract law may be seen, in our economic theory, as a method of providing a template of default rules and regulations that guide private parties to achieve the six purposes that we have outlined here and in Table 6.1. (We deal with the sixth purpose in the next section.) Like contracts, the officials who regulate them are imperfect. The officials who regulate contracts need information and motivation to correct market failures. In reality, courts have limited information and some judges lack motivation. Contract law should take the imperfection of officials into account by discouraging them from exceeding their own limitations in attempting to correct imperfect contracts.

**QUESTION 6.16:** The bargain theory of contract denies enforceability to promises to give a gift, but Anglo-American courts frequently enforce promises to give a gift under the doctrine of *detrimental reliance*. A court might enforce a promise to give a gift if the promisee

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**Table 6.1**

**Rationality, Transaction Costs, and Regulatory Doctrines of Contract Law**

<table>
<thead>
<tr>
<th>ASSUMPTION</th>
<th>IF VIOLATED, CONTRACT DOCTRINE</th>
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<tbody>
<tr>
<td><strong>A. Individual Rationality</strong></td>
<td></td>
</tr>
<tr>
<td>1. stable, well-ordered preferences</td>
<td>1. incompetency; incapacity</td>
</tr>
<tr>
<td>2. constrained choice</td>
<td>2. coercion; duress; necessity; impossibility</td>
</tr>
<tr>
<td><strong>B. Transaction Costs</strong></td>
<td></td>
</tr>
<tr>
<td>1. spillovers</td>
<td>1. unenforceability of contracts derogating public policy or statutory duty</td>
</tr>
<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>
</tr>
</tbody>
</table>

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21The original *Restatement of Contracts*, when issued in 1932, generally embraced the bargain theory in §75. However, in §90 the Restatement established enforceability of gift promises upon which a reasonable person had detrimentally relied without consideration. §90 is entitled “Promise Reasonably Inducing Definite and Substantial Action” and reads as follows:

“A promise which the promisor should reasonably expect to induce action or forbearance of a
relied to his or her detriment—for example, by incurring a debt or foregoing some valuable opportunity—on the promisor's fulfilling the promise. The law-and-economics literature recognizes that the enforceability of a promise to give a gift may increase the well-being of both the donor and of the donee. Still, some law-and-economics scholars are reluctant to make gift promises generally enforceable because of three problems: (1) evidentiary (i.e., determining whether a gift promise was really made and whether the donor truly meant to be held to it or was masquerading); (2) cautionary (i.e., most gift promises should not be made because the benefits from completion are small); and (3) channeling (i.e., most gift promises are made impulsively so that nonenforceability protects potential donors from their impulsive acts). Discuss each of these problems in terms of the categories of contract failure in Table 6.1.

G. Relational Contracts: The Economics of the Long-Run

Contracts often create relationships and relationships create legal duties that are not part of the contract. For example, when a customer opens a checking account with a U.S. bank, she signs a contract called a “depository agreement,” which creates a “fiduciary relationship.” This relationship imposes many duties upon the bank that are not stated in the depository agreement. As another illustration, a “franchisee” (local investor) may sign a contract with the “franchiser” (parent corporation) to operate a local fast-food restaurant. The franchise relationship creates many legal duties that the contract does not mention.

Business relationships often endure for years. Conditions change over the life of the relationship. The parties must respond to changing conditions as they pursue their own interests through the relationship. Accommodating the changes requires flexible understandings, not rigid rules. Consequently, formal rules do not tightly control human relationships, whether in business or personal life.

The parties to long-run relations often rely upon informal devices, rather than enforceable rules, to secure cooperation. Thus, an overbearing partner may be brought back into line by a warning rather than a law suit. Or a businessman who oversteps the ethical boundaries of his profession may be chastened by gossip and

definite and substantial character on the part of the promisee and which does induce such action or forbearance is binding if injustice can be avoided only by enforcement of the promise.”

This principle is generally referred to as “promissory estoppel,” although that phrase does not appear in §90. That section of the Restatement is used mainly in commercial, rather than gift, settings. For instance, it might be invoked to enforce a subcontractor’s bid upon which a contractor has relied. For recent attempts to reexamine the enforceability of gift promises, see Richard A. Posner, Gratuitous Promises in Economics and Law, 6 J. LEGAL STUD. 411 (1977); Melvin A. Eisenberg, Donative Promises, 47 U. CHI. L. REV. 1 (1979); Charles Goetz and Robert Scott, Enforcing Promises: An Examination of the Basis of Contract, 89 YALE L. J. 1261 (1980); Steven A. Shavell, An Economic Analysis of Altruism and Deferred Gifts, 20 J. LEGAL STUD. 401 (1991); and Andrew Kull, Reconsidering Gratuitous Promises, 21 J. LEGAL STUD. 39 (1992).
These informal devices usually operate within enduring relationships. Economists have studied how enduring relationships, as opposed to enforceable contracts, affect behavior. We will explain some of the central conclusions by using our example of the agency game.

1. **Repeated Game** In the agency game, the first player invests by placing some funds under the control of the second player. Economists call the first player who risks funds the “principal.” For example, the depositor is the principal in a fiduciary relationship with a bank, and the franchisee is the principal in a franchise relationship with a fast-food corporation. Economists call the second player, who controls the principal’s funds, the “agent.” For example, the bank is the agent in the fiduciary relationship, and the franchisor is the agent in the franchise relationship. The economic model of the “principal-agent relationship” applies to many legal relationships, including the fiduciary relationship and the franchiser-franchisee relationship.

To depict cooperation in an enduring relationship, assume that the agency game in Figure 6.1 is repeated indefinitely, thus transforming a “one-shot game” into a “repeated game.” In any round of the repeated game in which the principal (first player) invests, the agent (second player) enjoys an immediate advantage from appropriating. However, the principal can retaliate in subsequent rounds of the game to punish the agent.

Figure 6.8 illustrates an effective strategy for the principal to deter appropriation by retaliating against it. Assume that the agent appropriates in round $n$ of the game. The agent receives a payoff of 1 in round $n$. However, the principal retaliates by not investing in rounds $n + 1$ and $n + 2$. The agent receives a payoff of zero in rounds $n + 1$ and $n + 2$. Thus, the strategy of appropriation yields a total payoff to the agent equal to 1 in rounds $n$ through $n + 2$. These facts are summarized in the first row of Figure 6.8.

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23 Among lawyers, a leading representative of this school is Ian Macneil, and among economists, leading representatives are Oliver Williamson, Ben Klein, and Victor Goldberg. See also the classic study by Stewart Macaulay, *Non-Contractual Relations in Business: A Preliminary Study*, 28 AM. SOC. REV. 55 (1963).
Alternatively, assume that the agent could follow the strategy of cooperating in each round of the game. When the agent cooperates, the principal responds by investing. The agent’s payoffs in rounds $n$, $n + 1$, and $n + 2$ thus equal $.5$, $.5$, and $.5$. The strategy of cooperating yields a total payoff to the agent equal to $1.5$ in rounds $n$ through $n + 2$. These facts are summarized in the second row of Figure 6.8.

Figure 6.8 shows that the agent’s payoff in rounds $n$ through $n + 2$ is higher from cooperating than appropriating. This will be true for any three rounds of the game, provided that the principal continues playing the same strategy. For example, the total payoff to the agent who appropriates in rounds $n + 3$ through $n + 5$ equals $1$, whereas the total payoff for cooperating equals $1.5$. The agent benefits in the long run from cooperating rather than appropriating. The principal’s strategy of retaliation can teach this lesson to the agent. If the agent follows the strategy of appropriating in round $n$, he or she will probably learn a lesson by receiving zero payoff in rounds $n + 1$ and $n + 2$. After learning the lesson, the agent will probably switch to the strategy of cooperating in round $n + 3$.

We have described a strategy in which the principal repays the agent’s cooperation by investing, and the principal retaliates against the agent’s appropriation by not investing. Rewarding cooperation and punishing appropriation has been called “tit for tat.” When the principal plays the strategy of tit for tat, the agent maximizes payoff by cooperating. What about the principal? Does he or she maximize payoff by playing tit for tat? Experimental evidence indicates that tit for tat comes very close to maximizing the principal’s payoff in a variety of circumstances, and these empirical findings are generally supported by theory.

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24Figure 6.8 assumes no discounting for time. Strictly speaking, payoffs should be discounted by the time of receipt. Let $r$ denote the discount rate. Thus, the second player’s total payoff is higher from cooperating in round $n$ rather than appropriating provided the following inequality is satisfied:

$$
.5 + .5/(1 + r) + .5/(1 + r)^2 > 1.
$$


26Maskin and Fudenberg have proved that in any game (see the discussion of repeated games in Chapter 2) in which (1) players maximize the discounted sum of single period utilities, (2) the discount rate is not too high, and (3) the players can observe the past history of moves in the game, any pair of payoffs which Pareto-dominate the minimax can arise as average equilibrium payoffs of the repeated game. Thus, repetition of the game makes a Pareto improvement possible. This theorem, however, still leaves unexplained why the probability of a Pareto-efficient solution is as high as empirical studies suggest it to be. See Drew Fudenberg and Eric Maskin, The Folk Theorem in Repeated Games with Discounting, or With Incomplete Information, 54 ECONOMETRICA 533–554 (1986).

An element of mystery also surrounds the “end-game” problem. As we saw in Chapter 2, if a game of distribution is repeated an infinite number of times, cooperation is individually rational. If, however, such a game is repeated a finite number of times, “cheating” on the last round is individually rational. But if cheating is individually rational on the last round, it is also individually rational on the next to last round, and so forth. Thus, strict individual rationality causes the game to unwind. If, however, the players are willing to settle for a strategy that is very close to the self-interested maximum, but a little short of it, the end-game problem can be solved and the players will cooperate. In general, see Avinash Dixit and Barry Nalebuff, THINKING STRATEGICALLY: THE COMPETITIVE EDGE IN BUSINESS, POLITICS, AND EVERYDAY LIFE (1991) and Drew Fudenberg and Jean Tirole, GAME THEORY (1991).
Thus, the strategy of tit for tat is an efficient equilibrium to a repeated agency game.  

Let us summarize our theoretical conclusions. Figure 6.1 describes a problem of cooperation: the principal will not invest unless the agent has an incentive to cooperate. Figure 6.2 depicts a legal solution to the problem. The legal solution is to make an enforceable contract. An enforceable contract solves the problem by increasing the cost of appropriation to the agent. An enforceable contract presupposes an effective state to enforce contract and property law. In contrast, Figure 6.8 depicts a nonlegal solution to the problem. The nonlegal solution is to form an enduring relationship. An enduring relationship solves the problem by enabling the principal to retaliate when the agent appropriates. An enduring relationship does not necessarily require an effective state.

Long-run relationships require commitment. Traditional forms of commitment include friendship, kinship, ethnicity, and religion. Traditional forms of commitment can facilitate economic cooperation without state protection. Consequently, traditional forms of commitment often dominate economic life in communities with weak state protection. Business communities with weak state protection include international merchants, businesses in countries with weak or corrupt governments, businesses caught in civil wars, and foraging tribes that remain unsubordinated to states. Our model predicts, correctly, that traditional forms of commitment should flourish in these circumstances. Our model also predicts, correctly, that traditional forms of commitment will decline in these communities if the state brings effective law to them.

Similarly, traditional forms of commitment often dominate economic life in communities that face the state’s hostility. Businesses facing state hostility include organized crime and much private business in communist states. Our model predicts, correctly, that traditional forms of commitment should flourish in these circumstances.

Long-run relations can arise from commitments to institutions. For example, Japanese employees show a high level of commitment to the corporation, as evidenced by low rates of labor mobility. Our theory predicts correctly that long-run relationships will cause Japanese corporations to rely less on enforceable contracts as compared to American or European corporations. Long-run relations in the Japanese economy create more order and less law than in other countries.

Businesses have devised clever informal mechanisms to protect themselves against advantage-taking in long-run relationships. For example, David Teece found that large manufacturers like Ford often buy components from smaller companies through long-run contracts. In these contracts, Ford typically owns the specialized equipment needed in the manufacturing process and rents these machines

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As usual, our model has some implicit assumptions. The most important implicit assumptions are that the players can observe each others’ moves and they do not discount the future too heavily. The exceptional games without cooperative solutions need not concern us here. See Glenn W. Harrison and Jack Hirshleifer, An Experimental Evaluation of Weakest Link/Best Shot Models of Public Goods, 97 J. POLITICAL ECON. 201–225 (1989) and Jack Hirshleifer and Juan Carlos Martinez Coll, What Strategies Can Support the Evolutionary Emergence of Cooperation?, 32 J. CONFLICT RESOLUTION 367–398 (1988).
to the contractor. This method of structuring the relationship protects Ford from being held hostage by its suppliers.

To see why, suppose that a small contractor supplied Ford with a vital part for its cars and suppose that the small contractor owned the specialized equipment needed for making the part. Consequently, the small contractor would have the power to hold up Ford’s entire manufacturing process by refusing to supply the vital parts. This would disrupt Ford’s plans. By retaining ownership of the specialized machinery, Ford protects itself against this possibility. If the contractor refuses to deliver the vital parts, Ford reclaims the specialized equipment, shifts it to another supplier, and obtains the vital parts without undue delay.28

As an alternative to this practice, Ford could try to stipulate terms in its contracts with suppliers that preclude them from holding up production. However, formal contracts are often more clumsy and bureaucratic than informal mechanisms. Businesses often resort to long-run relationships to save transaction costs. As explained, enduring relations create repeated games that solve the problem of cooperation with less reliance on enforceable contracts.

A long-run business contract is more like a marriage than a single date. Conversely, sharp practices are likely when the contractual partners never expect to deal with each other again.

We have discussed forms of commitment that precede the state and persist without its support. Other long-run relationships arise within a framework of contract and property law. For example, law created the fiduciary relationship and the franchise relationship. We will discuss how law facilitates long-run relationships, but first we must develop our theory further, beginning with a problem that plagues long-run relationships.

2. Endgame Problem

Even long-run relationships end eventually. Near their end, business relationships often encounter trouble. To see why, return to our example of tit for tat as depicted in Figure 6.8. Recall that when the agent appropriates, the principal retaliates by not investing for several rounds. However, the principal has no power to retaliate on the last round of the game. Thus, the final round of the agency game has the same logic as a one-shot agency game.

To illustrate, assume that the repeated game in Figure 6.8 has an end and both parties know it. To be concrete, assume that both parties know the game will end after round \( n + 3 \). The agent does not fear retaliation for appropriating in round \( n + 3 \), because the agent knows that there will not be any more rounds. On round \( n + 3 \), the agent will receive a payoff of 1 from appropriating and a payoff of .5 from cooperating. Consequently, the agent maximizes his or her payoff in round \( n + 3 \). Thus, the players cannot cooperate in round \( n + 3 \).

We have shown that the last round in a repeated agency game has the same logic as a one-shot game. Consequently, the players in the agency game cannot

28 An excellent introduction to the economic theory suggested by Professor Teece’s study is Benjamin Klein, Robert Crawford, and Armen Alchian, Vertical Integration, Appropriate Rents, and the Competitive Contracting Process, 21 J. LAW & ECON. 297 (1978).
cooperate in the last round without enforceable contracts. Worse still, the players could fail to cooperate in every round of the game. To see why, consider the strict logic of the situation. We explained that the principal follows the strategy of tit for tat, which rewards cooperation by subsequent investing and punishes appropriation by not investing in subsequent rounds. We also explained that the principal will not invest in the last round, which is round $n + 3$. Consequently, the principal cannot use round $n + 3$ to reward cooperation or punish appropriation by the agent in round $n + 2$. Knowing this fact, the agent can appropriate in round $n + 2$ without fearing retaliation in round $n + 3$. If the fear of retaliation is removed, the agent will maximize his or her payoff by appropriating in round $n + 2$. Knowing this, the principal will refuse to invest in round $n + 2$.

The same logic now applies to round $n + 1$ and so forth back to the first round. In general, the demonstration that the players cannot cooperate in any given round leads to the conclusion that they cannot cooperate in the preceding round. If strictly rational parties know the round in which the repeated agency game ends, then the whole game unwinds, and the players fail to cooperate in any round.

The phrase “the endgame problem” describes the unwinding of cooperation as a repeated game approaches its final round. Eastern Europe provided a dramatic example of the endgame problem after 1989, as discussed in the accompanying box.

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**THE ENDGAME PROBLEM OF EASTERN EUROPE IN 1989**

The disintegration of Communist governments in Eastern Europe accelerated dramatically in 1989. Central planning failed irreparably, and markets rapidly replaced central planning as the organizing economic principle. Unfortunately, production declined throughout Eastern Europe at this time. Why did the shift to markets immediately produce economic decline rather than economic growth?

The “endgame problem” provides the key. Under communism, much production occurred through the “black market” (illegal) or the “gray market” (semilegal). Even the large state enterprises relied upon the black market or the gray market to perform their assigned tasks. The black market and the gray market did not enjoy protection from the state. Our theory predicts that businesses lacking effective legal protection will secure cooperation through long-run relationships. That is how Communist economies functioned. For example, a truck driver would haul goods for “free” as a “favor” to his friend who operated a gas station, and the gas-station operator would supply petrol for the trucker when supplies ran short.

The demise of communism massively disrupted political life. The disruptions caused people to doubt the persistence of their long-run economic relationships. With the end of relationships in sight, cooperation failed. For example, the trucker lost confidence that the gas-station operator could continue to supply petrol (the gas-station operator might lose her job), so the trucker stopped hauling the gas-station operator’s goods for free.

The failure of cooperation caused production to decline all over Eastern Europe after 1989. This situation could be corrected by effective legal protection for property and contracts. Some Eastern European states have made the correction. In other states, however, entrepreneurs still enjoy higher profits from stealing property (especially state property) than from producing goods.
3. Tentative Commitments  So far we have discussed commitment to enduring relationships. However, most business relationships are “open-ended.” Open-ended relationships have no predetermined end. They can persist indefinitely or end unexpectedly. Open-ended relationships dissolve and reform easily as circumstances change. Next we want to model open-ended relationships.

Assume as before that the agency game is repeated indefinitely. However, change the assumption that there are only two players. Instead, assume that there is an indefinite amount of players, who form into pairs to play each round of the game. At the end of each round, some of these relationships continue in the next round and others dissolve. Relationships dissolve in two ways. First, unforeseeable changes cause the parties to abandon the relationship. Second, the principal exits from the relationship after the agent appropriates.

To illustrate, assume that principal P and agent A form a business relationship in round \( n \) of the game. In round \( n \), \( P \) invests and \( A \) responds by cooperating. Each player enjoys a payoff of .5 in round \( n \). At the end of round \( n \), unforeseeable events might cause the relationship to dissolve. If unforeseeable events do not materialize, the parties continue the relationship in round \( n+1 \). Assume that \( P \) invests in round \( n+1 \) and \( A \) responds by appropriating. \( P \) will not continue in business with a partner who appropriates rather than cooperating. Consequently, \( P \) will dissolve the relationship at the end of round \( n+1 \) and refuse to continue in business with agent \( A \). Thus, the relationship between \( P \) and \( A \) may dissolve because of unforeseeable events or because of \( A \)'s appropriation.

When a relationship dissolves, the players must find new partners for the next round of the game. To illustrate, if the relationship dissolves between \( P \) and \( A \) in round \( n \), then each one must search for another partner in round \( n+1 \). The search does not automatically succeed. Players who look for a partner and fail to find one receive a payoff of zero during the rounds spent searching.

Assume that the principal follows the strategy of exiting whenever an agent appropriates. Thus, the principal punishes a disloyal agent by dissolving the relationship. Exit from a tentative relationship resembles tit for tat in an enduring relationship. In both cases, appropriation by the agent causes the principal to retaliate in the next round of the game.

When principals respond to disloyalty by exiting, the agents in the game face a choice between two alternative strategies. The first strategy is to cooperate, in which case the relationship continues until dissolved by an unforeseeable event. This strategy yields a payoff of .5 in each round that the relationship persists. The second strategy is to appropriate, thus provoking the first player to dissolve the relationship. By following the second strategy, the agent receives a payoff of 1.0 in the few rounds when he or she finds a partner, and a payoff of zero in the other rounds when the search for a partner is unsuccessful. In brief, the agent chooses between cooperating and receiving a modest payoff in most rounds of the game, or appropriating and receiving a large payoff in a few rounds of the game.

Notice that these two strategies in the agency game correspond to familiar facts about business. Some businesses try to make modest profits on many transactions. These businesses focus on long-run relationships with repeat customers. Other businesses try to make large profits on few transactions. These businesses focus on attracting new customers for one-time sales.
In a competitive equilibrium, both strategies must earn the same payoff. In other words, the strategy of cooperating in long-run relationships must yield the same payoff as the strategy of appropriating in one-shot relationships.

To illustrate, assume that in a stable equilibrium 70% of the agents follow the strategy of cooperating and 30% follow the strategy of appropriating. In other words, assume that the payoff to agents from cooperating equals the payoff from appropriating when 70% of them cooperate and 30% of them appropriate. To see how the system gets to equilibrium, assume that the system is out of equilibrium. Specifically, assume that the actual proportion of cooperating agents equals 75%, and the actual proportion of appropriating agents equals 25%. We are assuming that cooperating agents exceed the equilibrium by 5%. The excess of actual cooperators over the number required for equilibrium will cause the payoff from cooperating to fall below its equilibrium value. We are assuming that appropriating agents fall short of the equilibrium by 5%. The deficit of actual appropriators over the number required for equilibrium will cause the payoff from appropriating to rise above its equilibrium value. Now the payoff to appropriating exceeds the payoff to cooperating. Some cooperators will respond by switching strategies and appropriating. The switch will continue until the two strategies yield the same payoff. By assumption, the two strategies will yield the same payoff when 70% of the agents cooperate and 30% appropriate.

This account corresponds to the dynamics of real markets. To illustrate, consider the market for trial lawyers. Most trial lawyers realistically assess their clients’ prospects at trial and use this assessment as the basis for a settlement out of court. These lawyers correspond to cooperators in the agency game. These lawyers attract repeat customers and maintain long-run relationships with their clients. However, some lawyers provide unrealistically optimistic assessments of their clients’ prospects at trial and use these assessments to induce their clients to engage in costly litigation. These lawyers correspond to appropriators in the agency game. These lawyers attract relatively few repeat customers and maintain short-run relationships with most clients. The proportion of lawyers of each type adjusts in response to the profitability of the two strategies.

We have shown that the power of principals to exit from agency relationships makes some cooperation possible even without enforceable contracts. However, more effective laws can increase the amount of cooperation. To illustrate, the equilibrium ratio of cooperators to appropriators among agents in the preceding example was 70% to 30%. This ratio might rise if the state could effectively protect principals from appropriation. For example, effective contract and property law might increase the ratio to 95% to 5%.

The increase in cooperation would increase economic production. To illustrate, recall that the joint payoff from cooperation equals 1, and the joint payoff from appropriation equals zero. If 70% of the agents cooperate in each round, then production equals 70 per round. If 90% of the agents cooperate in each round, then production equals 90 per round. If effective contract law can increase cooperating agents from 70% to 90%, then production rises by 20 units, which is an increase in production of almost 30%.
We can apply this reasoning to the two kinds of trial lawyers. If the bar finds ways to reduce the profitability of trials relative to settlements for the lawyers, then more lawyers will try to settle cases, and fewer lawyers will provoke trials. The lawyers who try to settle cases out of court resolve more disputes in less time than the lawyers who provoke trials. Consequently, inducing a shift in strategy by lawyers towards settlements and away from trials will increase their productivity in resolving disputes.

4. Law of Long-Run Relations  We have explained that securing cooperation typically requires enforceable promises in one-shot transactions, exit in tentative relationships, and tit for tat in enduring relationships. As the time perspective lengthens, contract law becomes less concerned with enforcing promises and more concerned with facilitating relationships. The sixth purpose of contract law is to foster enduring relationships, which solve the problem of cooperation with less reliance on contracts.

**HOW TO EXCHANGE HOSTAGES**

Medieval kings used to guarantee the peace among themselves by exchanging hostages. If the hostage-giver starts a war, then the hostage-taker will refuse to return the hostage. Oliver Williamson has analyzed the logic of the exchange of hostages and applied it to modern contracts, especially in long-run relationships. (See Oliver Williamson, *Credible Commitments: Using Hostages to Support Exchange*, 83 AM. ECON. REV. 519 [1983].) Ask yourself this question: suppose that a king wants to exchange hostages with another monarch to guarantee the peace. Assume that the king likes diamonds as much as he likes his children. That is, he values a diamond ring just as much—neither more nor less than—as he values his own son. Which would make a better hostage: the king's diamond ring or his son?

The better hostage is the one that deters both the hostage-giver and the hostage-taker from starting a war. By assumption, the king values the diamond ring and his son equally; the fear of losing the ring by starting a war equals the fear of losing his son. They are equally good deterrents against the hostage-giver starting a war. However, they are not equally good deterrents against the hostage-taker starting a war. The hostage-taker would presumably like to have the diamond ring but presumably places little intrinsic value on having the son of the neighboring king. The hostage-taker, therefore, is more inclined to start a war and keep the hostage if he holds the diamond ring rather than the king's son. That is why the king's son is a better hostage than the diamond ring.

In general, a good hostage is something that the hostage-giver values highly and the hostage-taker values little. Asymmetrical valuation makes a good hostage.

**QUESTION 6.17:**

What sorts of things can corporations give as hostages in long-run contractual relations? Does hostage-giving in long-run relationships serve the same or a different function as consideration in a short-run contract?
The courts foster enduring relationships by providing a legal framework that encourages their formation. For example, we have seen that courts impute duties to relationships that arise out of contract, such as the fiduciary relationship and the franchise relationship. The imputation of these duties helps the parties to form the relationships. For example, the depositor knows that the law protects her deposit from appropriation by her fiduciary agent. Similarly, the franchisee knows that the law protects his investment against appropriation by the franchiser.

Disputes often arise in the course of a business relationship, bringing the parties into court. When the parties to an enduring relationship become entangled in a legal dispute, the court may try to repair the relationship. Repairing the relationship is different from enforcing the rights of the parties. Consequently, the courts sometimes adopt a different style of adjudication for long-run relationships than for one-shot transactions.

To illustrate, compare a divorce involving children and a dispute over the sale of an automobile. The divorcing parents of children need a long-run relationship with each other in order to care for the children. The court should try to promote a working relationship between them. A working relationship between them depends upon compromise. Searching for a compromise requires the judge to consider the broad equities of the relationship. Thus, the judge may perform some functions of a mediator.

In contrast, the buyer and seller of an automobile typically engage in a one-shot transaction. They do not need to deal with each other in the future after they resolve their suit. The judge does not need to promote a working relationship between them. Instead of searching for a compromise, the judge may try to find the rights of the parties. The rights of the parties can be decided on narrow facts in dispute, so the judge may ignore the broad equities of the relationship. Deciding the rights of the parties may produce a decision that completely favors one party over the other. A decision that completely favors one party over the other provides a clear definition of rights. A clear definition of rights facilitates bargaining and exchange, whereas a muddy definition of rights promotes future disagreements.

Legal sociologists have argued in recent years that many modern business disputes resemble family disputes more closely than disputed automobile sales. As a result, they argue that in order to better understand business-to-business relationships, we should pay much more attention to informal dispute-resolution mechanisms and norms of behavior within business communities than to the formal requirements of contract law. These sociologists, for example, favor alternatives to traditional means of resolving disputes. The alternative means of resolving disputes focus on repairing relationships. For example, when a franchiser and franchisee come to the court with a contract dispute, the judge may initially refuse to decide the rights of the parties. Instead the judge may hold that each party owes a duty to bargain in good faith with the other party to resolve their dispute. As this example illustrates, alternative dispute resolution focuses on processes rather than outcomes. Much research remains to be done in order to assess whether
a focus on process can improve the performance of courts in resolving disputes among people with long-run relationships.29

**Economic Theory of Contract Law**

**Six Purposes**

1. To enable people to cooperate by converting games with noncooperative solutions into games with cooperative solutions.
2. To encourage the efficient disclosure of information within the contractual relationship.
3. To secure optimal commitment to performing.
4. To secure optimal reliance.
5. To minimize transaction costs of negotiating contracts by supplying efficient default terms and regulations.
6. To foster enduring relationships, which solve the problem of cooperation with less reliance on contracts.

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**WEB NOTE 6.2:** For more on relational contracts, see our website.

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**CONCLUSION**

Contract law and the courts help people to cooperate by enforcing, interpreting, and regulating promises. By enforcing promises, contract law enables people to make credible commitments to cooperate with each other. By enforcing promises optimally, contract law creates incentives for efficient cooperation. Cooperation is efficient when the promisor invests in performing at the efficient level and the promisee relies at the efficient level. By laying out guidelines for information that must be revealed and that may be kept secret in a contractual relationship, contract law seeks to induce optimal informational exchange within the contractual relationship. By interpreting promises and articulating efficient terms, contract law and the courts can reduce the transaction costs of cooperating. Specifically, contract law and the courts reduce the costs of negotiating contracts by supplying efficient default terms. By regulating contracts, the courts can correct market failures. By correcting market failures arising from externalities, asymmetric information, and situational monopolies, contract law reduces the threat of opportunistic behavior that undermines the willingness of people to make commitments to each other. Finally, contract law helps to solve the problem of

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cooperation with minimal reliance on the apparatus of the state. The problem of cooperation is solved with minimal reliance upon the state by fostering enduring relationships.

We analyzed these purposes of contract law through a model of the agency game. We evaluated the agency game by the standard of Pareto efficiency. Pareto efficiency requires the law to help private parties achieve their goals as fully as possible. Economic analysis necessarily produces a theory of law that responds to the parties who make contracts, rather than a dogmatic theory of law that elevates ideas above interests.

SUGGESTED READINGS


