10 An Economic Theory of the Legal Process

The first thing we do—let's kill all the lawyers.

WILLIAM SHAKESPEARE,
HENRY VI, PART II, ACT IV, SCENE II

If you think that justice is expensive, try injustice.

ANONYMOUS
(Adapted from Derek Bok's famous comment about education and ignorance.)

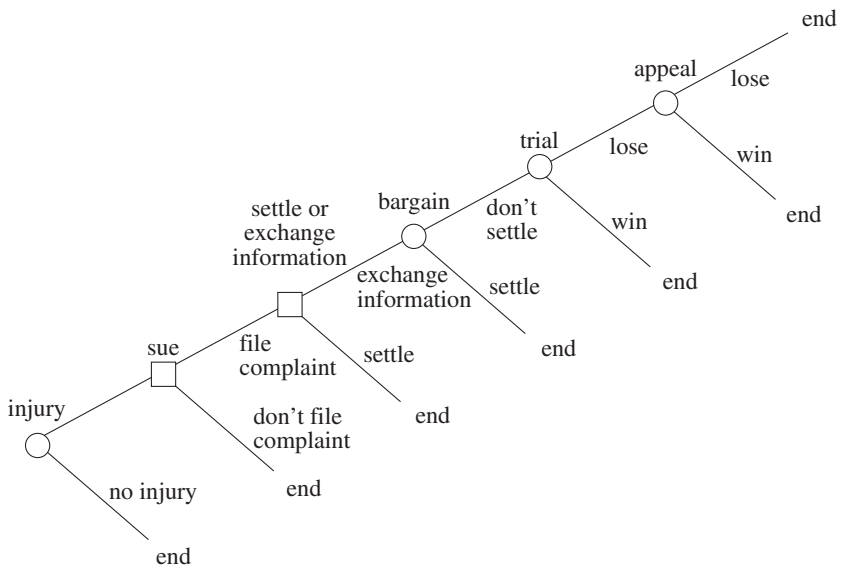
THE CLIENT SAID, "I want justice." His lawyer replied, "How much justice can you afford?"

The law and facts in a case usually require a court to reach a specific decision. Resolving a dispute on different terms from those required by the law and the facts usually amounts to injustice. Developing the law and facts in court, however, gets expensive fast. To the parties in a legal dispute, the procedures sometimes seem so clumsy and unnecessary that they feel Dick the Butcher's urge to kill all the lawyers. From the lawyer's viewpoint, however, the procedural law makes exquisite sense; justice is expensive, but it's worth it, like a fine automobile.

Is the intricacy and expense of the legal process the unavoidable cost of justice, or is it the tribute extracted from the public by a powerful legal profession? A theory of the incentives created by the legal process can help to answer this question. This chapter applies economics to the *procedural* aspects of civil disputes, whereas the preceding chapters applied economics to the *substantive* law of property, torts, and contracts. The procedural aspects concern the process from the filing of a complaint to the resolution of the dispute through dismissal, settlement, or litigation.

Although different countries follow different legal procedures, broad similarities exist. Consider some stages in the following legal dispute as it would develop in almost any country. Joe Potatoes suspects that Jim Bloggs has been romancing his wife, Joan Potatoes; Potatoes insults Bloggs and breaks his nose. Bloggs consults a lawyer, who files a legal complaint against Potatoes. Potatoes also consults a lawyer, who contacts Bloggs's lawyer, and the two lawyers try to settle the dispute. If the attempted settlement fails, the dispute proceeds through a series of legal steps, including the reply by Potatoes's lawyer to the complaint, a pretrial hearing with a judge, and the exchange of information about the case between the lawyers. If further negotiations fail to settle the dispute, a trial occurs, and, after the trial, either party may decide to appeal the decision

FIGURE 10.1
Stages in a legal dispute.



to a higher court. This example suggests that a full-blown legal dispute has the stages depicted in Figure 10.1, regardless of the substantive issues.

We will give examples of each of the stages in Figure 10.1.

> **Example 1:** In response to a magazine advertisement for "a sure means to kill grasshoppers," a farmer mailed $25 and receives by return post two wooden blocks with the instructions, "Place grasshopper on Block A and smash with Block B." Filing a legal complaint will cost the farmer more than the $25 that he lost. The farmer consults a lawyer to determine whether he has a legal remedy that is economically viable.

In order to bring suit, the plaintiff must have a "cause of action," which usually consists of harm caused by the defendant for which the law provides a remedy. In Example 1 (the grasshopper killer), the injury is the loss of $25, plus any additional losses from relying upon the misleading advertisement. Not every plaintiff with a cause of action can sue profitably. Example 1 raises the question, "When does it pay to file a suit?" We will answer this question soon by computing the plaintiff's expected value from asserting a legal claim.

> **Example 2:** Some consumers file suit alleging that the engines in their cars were destroyed by a defective fuel additive. The manufacturer of the fuel additive would like to settle the dispute before it goes to trial and newspapers learn about it. In order to decide how much money to offer as a settlement, the manufacturer's lawyer asks the judge to require the consumers' lawyer to disclose all available evidence concerning the cause and extent of damage to the cars.

Most legal systems require the parties to disclose some of their *private information* (facts known by one party to the dispute and unknown by the other) prior to trial. In the American legal system, the parties exchange extensive information before trial in a process known as "pretrial discovery." In the system used in Germany and other European countries, the parties exchange information in the "giving of proofs" at the first stage of a trial.

Example 2 (defective fuel additive) suggests that compulsory disclosure of private information promotes settlements. We will use game theory to test this proposition.

Example 3: Joan Potatoes wants to divorce her husband, Joe. They disagree over how to divide the value of their house. After bargaining between their lawyers fails, the judge considers whether to require them to consult a professional mediator before proceeding to trial.

Critics often complain that the formality of trials increases the cost of resolving disputes. Example 3 (divorce) raises the question of whether informal processes, like compulsory mediation, could improve upon formal legal procedures. To answer this question, we will use game theory to explain why bargaining sometimes succeeds and sometimes fails.

Example 4: A Los Angeles manufacturer faces large liabilities for dumping hazardous waste in 1965. The manufacturer files a claim with the London insurer that supplied its policy in 1965. The insurer denies that the insurance policy covers the loss. The manufacturer has the option of suing the insurer in Los Angeles or London. In Los Angeles, each side pays its own legal costs, whereas in London the loser pays the legal costs of the winner. The manufacturer asks its counsel how the allocation of legal costs should influence its choice of the place to file suit.

Different legal systems allocate the costs of trials differently. The polar opposite rules are "each-pays-his-own" legal costs (the "American rule") and "loser-pays-all" legal costs (the "English rule"). Example 4 (hazardous wastes) asks whether one of these rules especially favors defendants. To answer this question, we will consider the incentives created by alternative allocations of legal costs.

Example 5: Someone dives into a swimming pool and strikes her head on the bottom. She sues the owner of the pool for failing to post signs warning that the pool was too shallow for diving, and the pool owner replies that the victim should have checked the depth of the water before diving. At trial, the court applies the rule of negligence with a defense of contributory negligence, and the pool owner escapes liability. The plaintiff wonders whether to appeal the case and ask the court to depart from past precedent and apply the rule of comparative negligence.[1]

Finally, Example 5 raises the question of whether judges should create new rules to decide cases. Later we explain that this question relates closely to whether or not the common law evolves toward economically efficient rules.

I. The Goal of the Legal Process: Minimizing Social Costs

Is the legal process, as some critics contend, unnecessarily complicated and expensive? Evaluating different procedural rules and practices requires a measure of social costs. In Chapter 6, we found that a simple measure of the social costs of accidents provided a useful guide to the analysis of tort law Similarly, a simple measure of the social

[1] Comparative negligence would require the pool owner to pay damages in proportion to the harm caused by the negligence.

costs of the legal process provides a useful guide to the analysis of procedural laws. To develop a simple measure, think of procedural laws as instruments for applying substantive laws. Using the instruments costs something, which, following Chapter 6, we call "administrative costs." Administrative costs are the sum of the costs to everyone involved in passing through the stages of a legal dispute, such as the costs of filing a legal claim, exchanging information with the other party, bargaining in an attempt to settle, litigating, and appealing. In addition, the legal process sometimes makes errors in applying substantive law. For example, the wrong party may be held liable, or the right party may be held liable but for the wrong amount. Errors distort incentives and impose a variety of costs on society. Our simplest measure of social costs, denoted *SC,* combines administrative costs, denoted c_a, and costs of errors, denoted $c(e)$. *We assume that the economic objective of procedural law is to minimize the sum of administrative costs and error costs.*

$$\min SC = c_a + c(e) \tag{10.1}$$

To illustrate, assume that the parties settle out of court on the same terms that a trial would have produced. Because the results of settlement or trial are the same by assumption, the error costs (*if* there is an error) of settlement equal the error costs of trial. The administrative costs of the settlement, however, are much lower than those of a trial. Consequently, the settlement saves social costs. In general, settlements that replicate the results of trials reduce the social costs of resolving disputes.

In comparison to administrative costs, error costs are more difficult to understand and measure, because measuring an error requires a standard of perfection. To obtain a standard of perfection, consider the information possessed by courts. In reality, courts have imperfect information, which causes them to make mistakes when applying substantive law. As information improves, however, courts make fewer mistakes. As a thought experiment, imagine a court that possesses *perfect* information about the facts and the law for every case it decides. Such a court never makes mistakes. It never finds that the plaintiff caused the harm when the plaintiff did not cause it, or that the plaintiff did not cause the harm when the plaintiff caused it; it never finds that the plaintiff was negligent when the plaintiff was nonnegligent, or that the plaintiff was nonnegligent when the plaintiff was negligent; and it always awards the correct amount of damages. In brief, the court gives ideal decisions relative to existing law and the actual facts. We will call such a decision the *perfect-information judgment*, which we denote j^*.

The difference between the perfect-information judgment, j^*, and the actual judgment, j, *equals the extent of the court's error concerning damages* $e = j^* - j$. To illustrate by Example 2, the perfect information judgment j^* might award the owner of an automobile the exact cost of replacing the engine destroyed by a defective fuel additive, which equals, say, $2500. If the actual judgment equals $2000, then the extent of the error equals $j^* - j = \$500$. (As we noted, there are deviations from a perfect-information judgment other than an error in the computation of damages. Many of those other deviations can be expressed as errors in damages. For instance, if the defendant should have been found not liable but *was* found liable and assessed damages, then $j^* = 0$, and the error costs are equal to $-j$. And if the plaintiff should have won and received j^*, but the court mistakenly excused the defendant from liability and, therefore, gave the plaintiff no damages, then the error costs are equal to j^*.)

The *extent* of the error, however, does not necessarily equal its *social cost.* The social cost of an error depends additionally upon the distortions in incentives caused by the error. To illustrate, if perfect compensation equals $2500 and actual compensation equals $2000, the error of $500 may cause the manufacturer of fuel additives to lower quality control. Lowering quality control saves the manufacturer, say, $1000 and causes, say, an additional $10,000 in losses to the owners of automobiles. In this example, the social cost of the error $c(e)$ equals the *net* loss of $9000 from lower quality control: $c(\$500) = \$9000$.

In the rest of this chapter, we will model each stage in the legal process, show the incentive effects of different procedural rules and practices, and evaluate the alternatives in terms of social costs. In general, the social costs of errors are difficult to measure. Consequently, we will avoid conclusions that rely upon precise measurements of error.

QUESTION 10.1: Assume that the following legal rule applies to Example 1 (the "grasshopper killer"): "Breach of contract arising from false or misleading advertising results in liability equal to two times the consumer's out-of-pocket expenditures in reliance on the promise." Given this rule, what is the perfect-information judgment?

QUESTION 10.2: Why is a trial economically inferior to a settlement on the same terms as the expected trial judgment?

Web Note 10.1

Lawyers often experience a great deal of criticism. We shall deal very briefly with some of those criticisms later in the chapter. For a review of some interesting literature on the actual costs of justice in the United States and lawyers' compensation, see our website.

II. Why Sue?

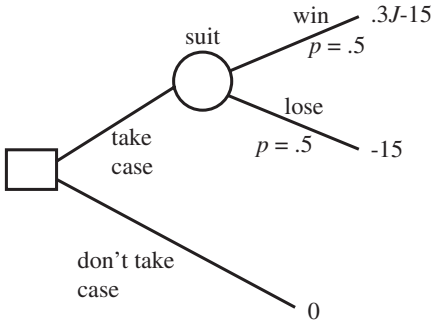
Most private disputes remain outside the courts. (A frequent estimate is that less than 5 percent of all legal disputes go to trial.) The courts typically get involved when the injured party asks them for a remedy. The filing of a suit marks the beginning of this formal process. These facts raise the question, "Why sue?" We will explain game theory's answer to this question.

A. Decision Trees

A client asks a lawyer to take his case and offers to pay the lawyer 30 percent of the court's judgment as the lawyer's fee. If the plaintiff wins and the court's judgment is j, then the lawyer gets $.3j$. Assume that the probability that the plaintiff will win, if there is a trial, is .5. If the plaintiff loses, the lawyer gets 0. The lawyer estimates that the time he will spend on the case is worth 15. What is the lowest value of the court's judgment at which the lawyer expects to gain by taking the case? The answer is 100.

Perhaps you can intuit the answer or perhaps not. In either case, the correct answer is easy to compute by using the decision tree in Figure 10.2:

FIGURE 10.2



By convention, the circles in the tree represent probabilities, and the squares represent decisions. The expected value of taking the case equals $.5(3j - 15) + .5(-15)$. The lawyer should take the case if the expected value of doing so is positive. The tipping point for taking the case is the judgment that makes the expected value zero: $.5(3j - 15) + .5(-15) = 0$. Solving this equation yields $j = 100$. So, the lawyer should take the case if he expects the judgment to equal or exceed 100.

Here is a slightly harder example of a decision tree. A business allegedly causes a consumer to suffer harm of 100. The consumer offers to settle the dispute for 50. If the business refuses, it will face a suit that will cost it 10 to litigate. If it loses at trial, the business will have to pay the consumer 100. What is the lowest probability of the consumer winning at which the business expects to gain by settling the case?

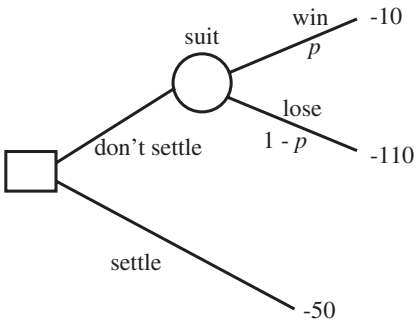
If the parties don't settle, they go to trial, and the plaintiff either wins or loses (Figure 10.3). If p indicates the probability that the plaintiff wins, then the probability that the plaintiff loses must equal $(1 - p)$. The expected payoff to the business from "don't settle" thus equals $-10p - (110)(1 - p)$, and the payoff from settling equals -50. To find the probability of winning at trial that is the tipping point for settling the case, set the former equal to the latter and solve for p:

$$-10p - (110)(1 - p) = -50 \Rightarrow p = .6.$$

The business should reject the settlement if it expects to win with probability at least as high as .6.

In many circumstances, using a decision tree significantly helps to clarify the right choice, especially when the decision gets more complicated, as in the next section.

FIGURE 10.3



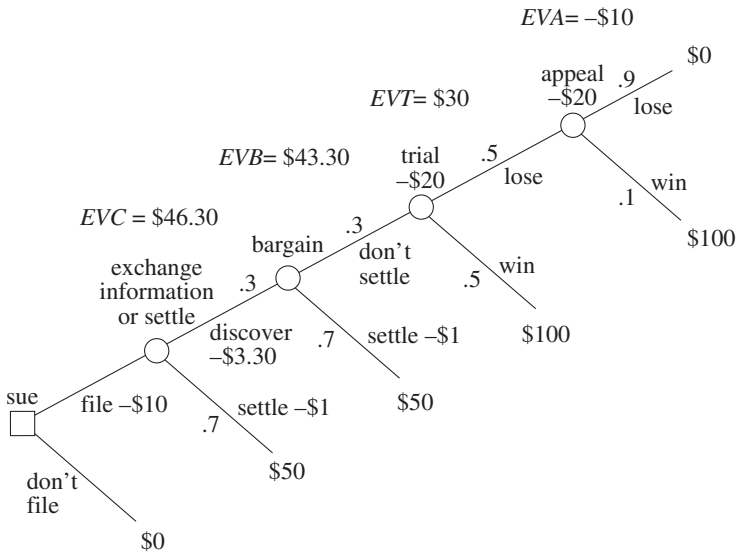
B. Computing the Value of a Legal Claim

To file a complaint, the plaintiff must usually hire a lawyer and pay filing fees to the court. Filing a complaint creates a legal claim. To decide whether to initiate a suit, a rational plaintiff compares the cost of the complaint and the expected value of the legal claim. The expected value of the legal claim (*EVC*) depends upon what the plaintiff thinks will occur after filing a complaint. Figure 10.1 depicts the possible events. To decide whether to file a complaint, the rational plaintiff must attach probabilities and payoffs to these events. Let us assume that the plaintiff, with the help of a lawyer, attaches the probabilities and payoffs to these events as depicted in Figure 10.4a. (We scaled down the numbers in Figure 10.4a below realistic levels to simplify the arithmetic.)

Before making the computations, we must explain our assumptions about who pays for legal costs. In America, each side usually pays his own legal costs. In Europe (and much of the rest of the world), the loser usually pays most of the winner's legal costs.[2] Simplifying, the American rule is "each pays his own," and the European rule (also called the "English rule") is "loser pays all." In general, the two rules require two slightly different ways of computing the value of a legal claim. The European rule is more complicated analytically because it makes the distribution of costs contingent on who wins. Consequently, we will first develop our example assuming that each side pays its own legal costs, and consider later the consequences of the loser's paying the legal costs for both sides. However, in order not to distract readers from situations in which the loser pays all, we contrive the numbers in our particular example so that "each pays his own" and "loser pays all" yield exactly the same decisions. The particular numbers in the following example are constructed so that both rules give the same answers, although they often give different answers in fact.

FIGURE 10.4a

Expected value of a legal claim to the plaintiff.



[2] We are grateful to Raoul Meier of Switzerland for pointing out an error in how we stated this rule in previous editions.

In order to compute expected values in a sequence of events, one begins with the last possible event, which is "appeal" in Figure 10.4a, and works toward the first event, which is the decision to file a complaint.[3] We will take this approach to computing the expected value of the legal claim at each step in the legal process. Assume that each side pays his own legal costs. According to Figure 10.4a, the plaintiff who has lost at trial must pay $20 to appeal the case. On appeal, the plaintiff stands to win $100 with probability .1 and to lose with probability .9. Thus, the expected value of the appeal (*EVA*) equals −$10:

$$EVA = .1(\$100) + .9(\$0) - \$20 = -\$10.$$

Because the expected value of appeal is negative, the rational plaintiff who loses at trial will not appeal the case. (Notice that if the rule were changed from "each pays his own" to "loser pays all," the expected value of trial would fall even further; so, the decision not to appeal is the same under the American rule and the European rule.)

Having computed the expected value of appeal (second trial), we can now compute the expected value of the first trial. According to Figure 10.4a, the plaintiff who failed to settle out of court by bargaining must pay $20 to go to trial. At trial, the plaintiff stands to win $100 with probability .5 and to lose with probability .5. If the plaintiff loses, he will not appeal the case and so will receive a payoff equal to $0. We combine these numbers to obtain the expected value of the first trial (*EVT*):

$$EVT = .5(\$100) + .5(\$0) - \$20 = \$30.$$

(Confirm for yourself that, assuming defendant's litigation costs are the same as plaintiff's litigation costs, *EVT* is the same under the European rule and the American rule.[4])

Having computed the expected value of the trial, we can now compute the expected value of bargaining to a settlement before beginning the trial. According to Figure 10.4a, the plaintiff who completed the process of exchanging information with the defendant can bargain to a settlement out of court with probability of success equal to .7. If bargaining succeeds, the plaintiff settles for $50 and pays settlement costs of $1. Bargaining fails to reach a settlement with probability .3, in which case the plaintiff proceeds to trial, whose expected value equals $30. We combine these numbers to obtain the expected value of the settlement bargain (*EVB*):

$$EVB = .7(\$50 - \$1) + .3(\$30) = \$43.30.$$

Because the expected value of the settlement bargain is positive, the plaintiff who reaches this stage will bargain.

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[3] This is called, in game theory, "backward induction" or the process of "looking forward and reasoning backward" or solving a game "recursively."

[4] Under the American rule, the plaintiff pays his own litigation costs of $20 with certainty, whereas under the European rule, the plaintiff pays no litigation costs with probability .5 and the plaintiff pays the litigation costs of both parties ($20 + $20) with probability .5. Thus, the plaintiff faces certain litigation costs of $20 under the American rule and expected litigation costs of $20 under the European rule. Remember that we are computing expected *values,* not expected *utilities.* (If you are not clear about the difference, see the relevant section of Chapter 2.)

Having computed the expected value of the bargain, we can now compute the expected value of the legal claim when the complaint is filed. After the complaint is filed, the parties may settle. According to Figure 10.4a, the plaintiff who files a suit settles immediately with probability .7, in which case he or she receives \$50 and pays \$1 in settlement costs. Alternatively, the plaintiff fails to settle immediately with probability .3 and proceeds to exchange information with the defendant, which costs \$3.30. After exchanging information, the parties continue to bargain. We already computed the expected value of the bargain, which equals \$43.30. We combine these numbers to obtain the expected value of the legal claim when the plaintiff initiates the suit by filing the complaint (*EVC*):

$$EVC = .7(\$50 - \$1) + .3(\$43.30 - \$3.30) = \$46.30.$$

In Germany and other European countries, discovery does not occur before the beginning of a trial. Rather, the first phase of a trial concerns the "giving of proofs" (*beweisverfahren*), in which the parties present evidence supporting the basic facts of the case. For purposes of computing the value of a claim from the decision tree, discovery and the giving of proofs are the same. (Some important differences between them must be taken into account in a more specific analysis.[5])

The filing costs (*FC*) include the costs of hiring a lawyer, drafting the complaint, and paying the filing fee assessed by the court. According to Figure 10.4a, the filing costs equal \$10. After filing, the plaintiff expects to receive the value of the claim at the time of filing (*EVC*), which equals \$46.30. Therefore, the expected net payoff from filing equals \$46.30 − \$10 = \$36.30. The rational plaintiff files a complaint if its expected net payoff is positive:

$$\begin{aligned} EVC \geq FC &\rightarrow \text{file legal complaint;} \\ EVC < FC &\rightarrow \text{do not file legal complaint.} \end{aligned} \tag{10.2}$$

Thus, the rational plaintiff in Figure 10.4a files a legal complaint.

What about the defendant? When the plaintiff files a complaint, the defendant must respond to it. To compute the best response, a rational defendant must solve a decision problem similar to the plaintiff's problem depicted in Figure 10.4a. The defendant's decision problem is to minimize the expected cost of his or her legal liability. Because the decision problem of the defendant parallels the decision problem of the plaintiff, we will not explicitly analyze it here.[6]

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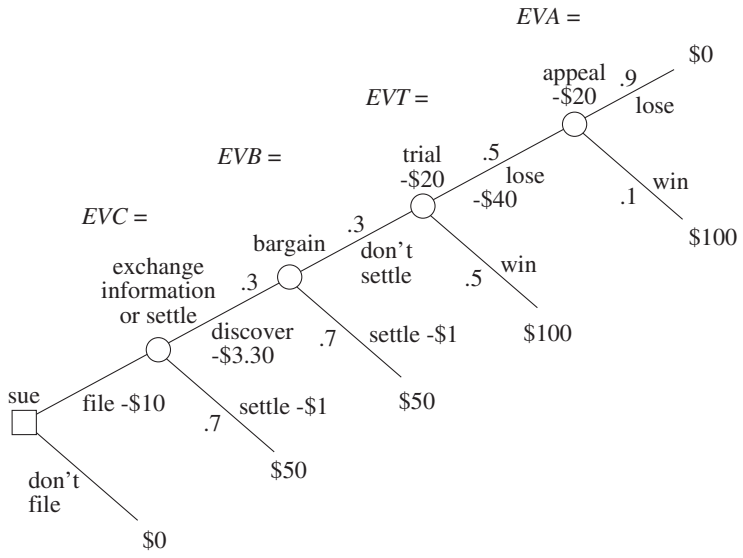
[5] At least four important differences exist. First, discovery does not take place before the judge or jury, whereas the giving of proofs occurs before the judge, who takes an active role. Second, in discovery one party can compel the other to reveal information, whereas compulsory revelation is limited or impossible in the giving of proofs. Third, discovery permits the examination and cross examination of witnesses, whereas in the giving of proofs the witnesses are named but not examined. Finally, in the giving of proofs the judge decides whether the alleged facts warrant proceeding to the next stage of the trial, whereas the judge in the American system usually decides this issue in a separate hearing that may occur before or after discovery when the plaintiff moves for summary judgment.

[6] You should note that the two parties may not agree about the amounts at stake or the probabilities of success at each stage. We will assume for the time being that the amounts and probabilities are similar. Later we will relax that assumption.

FIGURE 10.4b



QUESTION 10.3: The tree in Figure 10.4b is identical to that in Figure 10.4a, except that a trial costs the plaintiff $40 instead of $20, and settlement is for $51 instead of $50. Solve recursively for the expected values of the legal claim by filling in the blanks at each stage in the following tree. What is the plaintiff's expected net profit from filing a legal complaint?

QUESTION 10.4: In Europe, the party who loses at trial pays the litigation costs of the winner. Assume that the plaintiff in the preceding figure pays litigation costs of $40 if she loses at trial, and the plaintiff pays litigation costs of $0 if she wins. Recompute the expected values of the legal claim under this assumption.

III. Exchange of Information

Having analyzed the filing of a complaint, we now consider the next stage in a legal dispute, as depicted in Figure 10.1—the exchange of information between the parties.

A. Bad News Is Good for Settlements

After the plaintiff complains and the defendant responds, the two parties try to resolve their dispute before it leads to a trial. Why do some complaints end up being tried rather than settled? It might seem on first impression that trials, being so costly, would not occur unless someone behaves irrationally. Like many first impressions, this one is wrong. Game theory explains why rational bargainers sometimes fail to settle their disputes and end up in trial. Although there are several strands of the argument, the simplest explanation is that trials occur because the parties have different expectations about its outcome: The plaintiff expects liability and a large judgment, and the defendant expects no liability or a small judgment. In these circumstances, the parties are

relatively optimistic. Given relative optimism, the plaintiff demands a large settlement, and the defendant offers a small settlement, so the parties cannot agree on the terms for settling out of court.

To illustrate concretely, assume that a bus collides with a pedestrian. The bus company admits fault, but the parties disagree over damages. The bus company, which believes that the pedestrian suffered minor injuries, predicts that a trial will cost it $1,000 and result in a judgment of $1,500, thus costing a total of $2,500. The pedestrian, who actually suffered a serious injury requiring surgery, predicts that a trial will cost $1,000 and result in a judgment of $15,000, thus resulting in a net gain of $14,000. *If the plaintiff's expected value of the judgment at trial exceeds the defendant's expected value of the judgment at trial, we say that the parties are relatively optimistic.*

The bus company's false optimism about trial will cause it to reject any settlement on terms acceptable to the pedestrian. In general, the plaintiff usually rejects an offer by the defendant that falls short of the expected value of the legal claim.[7] In the preceding example, the plaintiff will reject an offer to settle for less than $14,000. (We can develop this argument futher by using the Nash Bargaining solution from Chapter 4.[8])

Turning from the plaintiff to the defendant, the defendant's offer reflects the expected value of his or her legal liability. The defendant usually rejects a demand by the plaintiff that exceeds the expected value of the legal liability. To illustrate by the preceding example, the defendant will reject a demand to settle for more than $2,500.

As explained, relative optimism about trial makes settlement out of court difficult. Conversely, relative pessimism makes settlement easy. We revise the numbers in the bus-pedestrian example to reflect relative pessimism. Assume as before that a bus collides with a pedestrian, the bus company admits fault, and the estimates of damages by the two parties diverge to reflect pessimism about trial. The bus company, which knows that the pedestrian had surgery, believes that a trial will cost it $1000 and result in a judgment of $15,000, thus costing a total of $16,000. The pedestrian knows that the surgery corrected a preexisting condition, not an injury caused by the accident Therefore, the pedestrian predicts that a trial will cost $1,000 and result in a judgment of $1,500, thus resulting in a net gain of $500 The bus company's false pessimism about a trial will cause it to accept a settlement offer of, say, $10,000, which far exceeds what the pedestrian believes can be had at trial As long as the bus company remains ignorant of the facts, the case should settle out of court.

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[7] We say "usually" because, recall, we are talking about expected *values,* not expected *utilities.* It is possible that a risk-averse plaintiff will accept a settlement offer that is less than the expected value of the legal claim. Similar reservations may be made about the defendant's behavior.

[8] A reasonable party in a bargain will demand to receive his or her threat point T plus an equal share of the surplus from cooperating. In bargaining to avoid a trial, the threat position of the plaintiff T_p is what he or she expects to gain (the "expected value of the legal claim" as depicted in Figure 10.2) if they do not settle out of court. Similarly, the threat position of the defendant T_d is what he or she expects to lose if they do not settle out of court. The cooperative value of the game C equals the sum of the value of a settlement to the plaintiff and the defendant. The reasonable amount for the plaintiff to demand to settle the case is $T_p + \frac{1}{2}(C - T_p - T_d)$. The reasonable amount for the defendant to offer to settle the case is $T_d + \frac{1}{2}(C - T_p - T_d)$. If T_p is much greater than T_d, the defendant will reject the reasonable plaintiff's demand. Equivalently, the plaintiff will reject the reasonable defendant's offer.

In many suits, the defendant knows less than the plaintiff about the extent of the injury, and the plaintiff knows less than the defendant about the extent of the defendant's precautions against the accident. If the defendant overestimates the plaintiff's injury, and the plaintiff overestimates the defendant's precaution, then both parties are relatively pessimistic; so, settlement is easy. Conversely, if the defendant underestimates the plaintiff's injury, and the plaintiff underestimates the defendant's precaution, then both parties are relatively optimistic; so, settlement is difficult.

The expected value of the legal claim diverges for the parties because of *private information,* which means valuable information (what lawyers call "material information") possessed by one party and not possessed by the other. When relative optimism initially prevents the parties from settling out of court, they may be able to correct the relative optimism before trial by exchanging information. To correct relative optimism, one party gives the other some "news"—information previously unknown to the recipient. The news is "bad" if it causes the recipient to expect a worse result at trial. Transmitting bad news is good for settlements.

B. Bad News Is Free

The parties to a legal dispute exchange some private information voluntarily, without the law's requiring it. Voluntary pooling of information occurs informally through discussions between the parties, and it also occurs formally, as when the judge holds a pretrial conference in which the parties are asked to discuss their positions in the dispute. In the first stage of a European trial, where the plaintiff gives proofs to support the complaint, and the defendant replies to the alleged proofs, the parties exchange information before the judge. In the United States, the exchange of information between the parties prior to trial does not usually occur before the judge.

In addition to the voluntary exchange of information, some pooling of information is compulsory. For example, the law may require the party making a complaint to tell the other side what it will prove in court in the event that a trial occurs. In the United States, the law compels each side to answer questions about the case asked by the other side. This practice is called *discovery*, because one party has the right to discover certain facts known to the other party. In contrast, in Europe the judge can ask the parties for any relevant information, but the parties are limited in their ability to ask questions on their own.

We will ask two questions about the relationship between voluntary and involuntary pooling of information. First, "Does the voluntary pooling of information promote settlements out of court?" Second, "Does involuntary pooling of information promote more settlements beyond the number achieved by voluntary pooling?"

In general, *the parties tend to disclose information voluntarily before trial to correct the other side's relative optimism, thereby promoting settlements.* In other words, bad news is free. To see why, return to the example in which a bus collides with a pedestrian, the bus company admits fault, and the bus company mistakenly believes that the pedestrian suffered a minor injury. The bus company predicts inaccurately that a trial will cost it $1000 and result in a judgment of $1500, and the pedestrian predicts accurately that a trial will cost $1000 and result in a judgment of $15,000. A settlement

could save each party $1000 in trial costs. However, the bus company's false optimism about a trial will cause it to reject any settlement on terms acceptable to the pedestrian. Knowing these facts, the pedestrian has an incentive to correct the bus company's false optimism by revealing the extent of the injuries. By doing so, the pedestrian can probably enable the parties to settle and save the costs of a trial, which will benefit both of them. Thus, the pedestrian might voluntarily provide medical records to prove to the bus company that the accident caused serious injuries.

We will state the conclusion of this example more abstractly. As explained, trials occur when the parties are relatively optimistic about their outcome, so that each side prefers a trial rather than settlement on terms acceptable to the other side. When the parties are relatively optimistic, at least one of them is uninformed. Pooling of information before trial that reduces relative optimism promotes settlements. Furthermore, by revealing private information to correct the other side's false optimism, the party making the disclosure increases the probability of settling on more favorable terms. Thus, efficiency (through saving the costs of trial) and redistribution (through strengthening your bargaining position) provide incentives to voluntarily disclose facts correcting the other side's false optimism.

Similarly, *the parties tend to withhold information that would correct the other side's relative pessimism, thereby promoting settlements.* To see why, return to the preceding example, but assume that the bus company's mistaken belief is falsely pessimistic. The bus company, which knows that the pedestrian had surgery and mistakenly attributes its cause to the bus accident, believes that a trial will cost it $1000 and result in a judgment of $15,000, whereas the pedestrian, who knows that the surgery corrected a pre-existing condition, predicts that a trial will cost $1000 and result in a judgment of $1500. The bus company's false pessimism about a trial will cause it to accept a settlement offer that far exceeds what the pedestrian would win at trial. As long as the bus company remains ignorant of the facts, the case should settle out of court. Knowing these facts, the pedestrian has an incentive to withhold information about the true extent of the injury.

We have explained that voluntary pooling of information tends to correct false optimism and to leave false pessimism uncorrected, both of which promote settlements out of court. We speak of "tendencies" and not "certainties," because expectations are partly logical and partly psychological. The parties to a dispute must guess at what information the other has withheld, and various possibilities can occur in fact.

Now we turn to involuntary disclosure, which occurs when one party discovers information withheld by the other party. As explained, the information withheld is the mirror image of the information voluntarily disclosed: Parties withhold information that would correct the other side's false pessimism. Being compulsory, discovery tends to uncover the information that was withheld, thus correcting false pessimism. Correcting false pessimism decreases the likelihood that someone will make unnecessary concessions when bargaining. In general, *the parties tend to discover information that corrects their relative pessimism, thereby causing them to demand better terms to settle out of court.*

To illustrate, return to the example of the bus company that believes incorrectly that a trial will result in a large judgment, whereas the pedestrian knows that a trial will

result in a small judgment. The bus company's false pessimism about a trial will cause it to accept a settlement offer that far exceeds what the pedestrian would get at trial. If the bus company discovers the truth, it will save itself a lot of money by demanding better terms to settle out of court. The pedestrian, therefore, will not voluntarily correct the bus company's false pessimism, although the bus company may discover the truth by asking questions that the pedestrian is legally required to answer.

Discovering information that causes someone to demand better terms presumably makes settling out of court less likely. (There may be an effect in the opposite direction that we do not discuss.[9])

We summarize our conclusions about the exchange of information before a trial:

voluntary disclosure $\Rightarrow$ corrects false optimism $\Rightarrow$ causes settlement

involuntary disclosure $\Rightarrow$ corrects false pessimism $\Rightarrow$ causes trials.

Loss Aversion, Regret Aversion, and Trials

An alternative (or supplemental) explanation to our relative optimism explanation for litigation is the presence of "loss aversion." This is a view of behavior under uncertainty developed by Daniel Kahneman and Amos Tversky on the basis of empirical research.[10] In making decisions about choices involving risk, people tend to "frame" results as gains or losses from their current situation. They tend to be risk-averse with respect to gains and risk-seeking with respect to losses. Suppose that someone is put to the following choice:

1. A sure gain of $50, or
2. A gamble in which there is a .5 probability of gaining $100 and a .5 probability of gaining nothing.

Both choices have an expected value of $50, and most people prefer the sure gain to the gamble.

However, suppose that someone is put to a choice between the following:

1. A sure loss of $50, or
2. A gamble in which there is a .5 probability of losing $100 and a .5 probability of losing nothing.

Both choices have an expected value of –$50, and many people prefer the gamble to the sure loss.

Applying these ideas to litigation, Jeff Rachlinski has argued that plaintiffs may frame the choice between trial and settlement as one between the certain gain of a settlement and the probabilistic gain of a successful trial. If most plaintiffs are risk averse, then they will prefer settlement to litigation. However, defendants may view the choice as

(*Continued*)

[9] The knowledge that discovery can force revelation of all materially relevant information may increase trust between the two parties, which makes settling out of court easier. Empirical research is needed to decide whether, on balance, discovery increases or decreases settlements relative to voluntary disclosure.

[10] See Daniel Kahneman & Amos Tversky, *Prospect Theory: An Analysis of Decision Under Risk,* 47 ECONOMETRICA 263 (1979). Professor Kahneman won the Nobel Prize in Economics in October 2002.

one between the certain loss of a settlement and the probabilistic loss from a trial. To the extent that most defendants are loss averse—that is, risk-seeking with respect to losses—they will prefer litigation to settlement.[11]

Chris Guthrie has suggested a psychological reason why settlements might occur more often than logic might suggest. Litigants who settle will never know what they might have obtained at trial; so, they will feel no regret. Litigants who proceed to trial, however, might feel regret if they reject a settlement offer that proves better than the trial outcome. He predicted, consequently, that many litigants will choose settlement over trial so as to avoid feelings of regret. (See *Better Settle Than Sorry: The Regret Aversion Theory of Litigation Behavior*, 1999 U. ILL. L. REV. 43.)

He tested this hypothesis in two empirical studies in which participants had to decide whether to settle or sue. One group made their choice in a "traditional" jurisdiction, defined as one in which "the litigant will not learn what would have happened at trial if she settles the case." In a traditional jurisdiction, settlement thus precludes the possibility of regret. The other group made their choices in a "regret jurisdiction," defined as one in which "the judge is required, upon learning that the parties have reached an out-of-court settlement, to inform the parties of what he would have awarded" had they gone to trial. In a regret jurisdiction, the parties can feel regret regardless of whether they settle or litigate. Dean Guthrie predicted, and his statistics confirmed, that litigants in a traditional jurisdiction would settle more often than litigants in a regret jurisdiction.

C. United States vs. Europe

Different countries and jurisdictions have different rules about discovery. The most extensive and elaborate discovery occurs in the United States. Long before a trial begins in America, each side must reveal the basic arguments that it plans to use in trial, the evidence supporting these arguments, the names of witnesses, and the general nature of the testimony that witnesses will supply. The failure to disclose arguments or evidence may cause the judge to prevent their use in a trial. Further, the American rules of procedure entitle each side to discover any evidence possessed by the other side that has material relevance to the case, such as inspecting physical objects, reading documents, and deposing expert witnesses. The discovery of new facts can radically alter the course of the legal dispute.

Unlike the United States, most European countries have little or no discovery. Several practical reasons account for this difference in procedures. In America, a party to a suit has a constitutional right to request a trial by jury. Serving on a jury takes its members away from their jobs and other activities. The court tries to minimize the disruption of jurors' lives by making the parties prepare extensively before the trial, and then proceeding from beginning to end of the trial without interruption. In contrast, European countries seldom use juries to decide civil cases. Delays and interruptions in proceedings inconvenience judges less than juries; so, European trials often pause and

[11] *Gains, Losses, and the Psychology of Litigation*, 70 SO. CAL. L. REV. 113 (1996).

resume several times before reaching an end. American trials are like performing a play from the first act to the final act, whereas European trials are like filming a movie in segments with pauses in between.

Another difference concerns the role of the judge. In the civil tradition of Europe, the judge takes an active role in developing arguments and exploring evidence (called an "inquisitorial procedure"). Indeed, the judge may not allow the lawyers to examine witnesses or scrutinize certain evidence before the trial. Unprepared witnesses are more candid and reveal many facts inadvertently (they may "lapse into candor," as lawyers say). In the common law tradition, however, the judge takes a more passive role. Instead of directing the case, the common law judge referees a contest between opposing attorneys (called an "adversarial procedure"). In America, the judge expects the lawyers to develop the arguments and explore the evidence *before* the case comes to trial. Preparation improves the quality of the argument, and a prepared witness goes directly to the point of his or her testimony.

D. Minimizing Social Costs

Now we relate our contrast between voluntary and involuntary pooling of information to the objective of minimizing the sum of administrative costs and error costs. The voluntary pooling of information avoids trials, and avoiding trials saves administrative costs. Furthermore, the voluntary exchange of information corrects some miscalculations that cause the terms of a settlement to diverge from the expected trial judgment. Narrowing the gap between the terms of the settlement and the expected trial judgment usually reduces error costs. (More on this later.) Therefore, *the voluntary pooling of information usually reduces both components of social costs—administrative costs and error costs.*

The effects of *compulsory* pooling of information on social costs are more ambiguous. First consider the effect of discovery on administrative costs. As explained above, game theory does not generally predict whether discovery encourages or discourages settlements. In the event of a trial, discovery prior to trial often simplifies the arguments and proofs made during trial. However, it is uncertain whether discovery reduces the cost of trials by an amount commensurate with the cost of discovery itself.[12] Current research does not permit us to conclude whether discovery reduces administrative costs.

Now we turn to error costs. Discovery, as we saw above, corrects some miscalculations that cause the terms of a settlement to diverge from the expected trial judgment. Because discovery narrows the gap between the terms of settlement and the expected trial judgment, we conclude that *discovery usually reduces error.*

In summary, the involuntary pooling of information reduces one component of social costs (error costs) but may not reduce the other (administrative costs).

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[12] Discovery is a cheaper process than litigation; therefore, discovering facts prior to trial is cheaper than finding the same facts in trial. However, discovery is more certain to occur than trials. Consequently, postponing the compulsory disclosure of facts until trial implies the possibility that a settlement will completely avoid this cost.

Discovery Abuse: The Process is the Punishment

Suppose that you had the legal power to require someone to bear the expense of supplying you with enough documents to fill a railroad boxcar. In complex legal disputes in America, the legal right to discovery sometimes gives such powers to one of the parties. One party can require the other to deliver a boxcar of documents, provided that they are materially relevant to the suit and compliance is not unduly burdensome [FEDERAL RULES OF PROCEDURE, Rule 26(b)(1)].

Unlike current federal law, economics provides a clear account of discovery abuse and its remedy. From an economic perspective, abuse occurs when the cost of making and complying with a discovery request exceeds the expected value of the information to the requesting party. The cost of making and complying with a request for documents equals the cost of formulating the request, finding the documents, examining all of them, and reproducing and delivering some of them. The expected value of the information to the requesting party equals the expected increase in the value of the legal claim caused by the evidence obtained from the documents.

Under current U.S. law, the plaintiff pays most of the cost of *making* a discovery request, and the defendant pays much of the cost of *complying* with it. Externalizing compliance costs provides an incentive for discovery abuse. To illustrate, assume that the plaintiff spends $500 to make a discovery request, and the defendant spends $2000 to comply. The total cost of the request to both parties equals $2500. Assume that the plaintiff expects the request to produce evidence increasing the value of the legal claim by less than $1500. Because the plaintiff pays $500 to obtain an expected payoff of $1500, the plaintiff has a strong incentive to make the request. Because the cost ($2500) exceeds the expected benefit ($1500), the request is abusive. Thus, current U.S. law gives strong incentives for discovery abuse.

Notice that the incentive for abuse would disappear if the plaintiff had to pay the defendant's cost of compliance, thus internalizing the full cost of the discovery request. Discovery illustrates a general proposition: *People can use legal procedures to abuse others whenever one party has the right to request a procedure and the other party must bear part of the cost of complying with the request. Furthermore, shifting the cost of compliance to the party making the request eliminates the incentive for abuse.*

QUESTION 10.5: Example 4 at the beginning of this chapter concerns whether a judge should order a divorcing couple to attempt mediation before beginning a trial. Assume that false optimism causes trials and predict whether compulsory mediation would cause more disputes to be settled without trial.

QUESTION 10.6: Assume that discovery increases the optimism of plaintiffs and thus increases the value of their legal claims. Explain the consequences for the number of claims filed.

QUESTION 10.7: Trial procedures are formal and involve a lot of people, whereas discovery procedures are relatively informal and involve relatively few people. Consequently, discovering a fact before trial is cheaper than

finding it during trial. Most trials, however, are averted through an out-of-court settlement. As a result, if the parties postpone finding a fact until trial, they may avoid the cost completely. To appreciate this trade-off between cost and certainty, consider a numerical problem. Let x denote the ratio of the cost of finding a fact during the trial and the cost of discovering the fact before trial. Assume that the probability of a settlement out of court equals .9. How large must x be in order for the expected cost of finding the fact at trial to exceed the cost of discovering it before trial?

QUESTION 10.8: Discovery increases deliberation, which improves the quality of argument. However, discovery reduces spontaneity, and spontaneous answers by witnesses are sometimes more revealing than considered answers. ("When desperate, tell the truth.") A complete economic theory of discovery would thus model the trade-off between deliberation and spontaneity in revealing the truth. Describe some considerations that you think would go into modeling this trade-off.

IV. Settlement Bargaining

Having analyzed the exchange of information, we move to the next stage in Figure 10.1, which concerns bargaining to attempt to settle out of court. Unlike the other stages, procedural law does not prescribe a time for bargaining to settle disputes. Rather, bargaining can occur at any time in the legal process. We place bargaining at the stage just before trial in Figure 10.1 because bargaining often intensifies before the beginning of an expensive legal process in an attempt to avoid it. However, bargaining may well continue after a trial has begun and even while the jury is deliberating.

Most disputes are resolved without resorting to trial. Estimates suggest that less than 5 percent of civil disputes filed actually require the commencement of a trial in order to resolve them.[13] Bargaining is more important than trials for the resolution of most disputes. However, bargaining occurs *in the shadow of the law.* In other words, expectations about trials determine the outcomes of bargains.

A. Settlements Replicating Trials

We begin by reviewing the elements of bargaining theory as developed in Chapter 4. In a bargaining situation, the parties can cooperate, or each party can act on its own without the other party's cooperation. The joint payoff from cooperating exceeds the sum

[13] See Galanter, *Reading the Landscape of Disputes: What We Know and Don't Know (and Think We Know) About Our Allegedly Contentious and Litigious Society,* 31 UCLA L. REV. 40, 44 (1983). However, a more careful disaggregation of data reveals a complicated picture. Erhard Blankenberg found that the ratio of settlement to judgment in Germany was 10 to 1 for traffic accidents, but only 2.7 to 1 for debt collection, 2.4 to 1 for disputes over service contracts, and 1.7 to 1 for disputes about rental contracts. See Blankenberg, *Legal Insurance, Litigant Decisions, and the Rising Caseloads of Courts: A West German Study,* 16 LAW & SOC. REV. 619 (1981–1982).

of individual payoffs from not cooperating. In order to induce someone to cooperate, the party must receive at least as much as can be obtained by not cooperating, which is called a *threat value* by economists. (A better term to use in court is "go-it-alone" value or "concession limit.") The sum of the threat values equals the *noncooperative value* of the game. The difference between the joint payoff from cooperating and the noncooperative value of the game equals the *cooperative surplus.* In order to cooperate, the parties must agree about dividing the cooperative surplus. An equal division of the surplus is *reasonable.* The rational pursuit of narrow self-interest, however, does not guarantee that the parties will be reasonable; so, they may not agree, or they may reach an unreasonable agreement.

Now we apply these concepts to settlement bargaining in a civil dispute. (We already did so briefly in the box in Chapter 4 titled "A Civil Dispute as a Bargaining Game.") In a civil dispute, an agreement to settle out of court can replicate any judgment that the court would have reached after a trial. To illustrate by a divorce, suppose the court concludes after a trial that the parties should sell the house and divide the proceeds equally, and custody of the children should be divided between husband and wife in the proportions 40 percent and 60 percent. If the parties had agreed to these terms without a trial, the judge would have accepted the agreement and enforced it. Thus, a settlement could achieve the same outcome as a trial, and the parties would save the cost of litigation. The savings in the cost of a trial could have been divided between the parties, making both of them better off. For any trial, a settlement usually exists that makes both parties better off; so, trials are usually inefficient.

Exceptions to this generalization about efficiency sometimes occur, as when one side wants the publicity of a trial, or when one side wants to create a generally accepted precedent by winning on appeal. We need not concern ourselves with these exceptions now.

A settlement out of court is a cooperative solution, and a trial is the noncooperative solution. The difference between the joint payoffs from a settlement and the sum of the individual payoffs from a trial equals the cooperative surplus. A reasonable settlement divides the cooperative surplus equally. We show how to calculate these values using Figure 10.4a. According to that figure, the plaintiff expects to win $100 at trial with probability .5, and to lose with probability .5. Win or lose, the trial will cost the plaintiff $20. If the plaintiff loses, he will not appeal, because the expected value of an appeal is negative, according to Figure 10.4a. Therefore, the plaintiff's expected value of trial equals $30. Because a trial requires no cooperation from the other party, the plaintiff's expected value of trial equals his threat value.

To develop this example into a bargaining problem, we must also describe the defendant's expected value of trial. Assume that the defendant is the mirror image of the plaintiff so that the defendant expects to lose $100 at trial with probability .5, and to win with probability .5. Win or lose, the trial will cost the defendant $20. If the defendant loses, she will not appeal, because we assume that the expected value of an appeal is negative. We compute the defendant's expected value of trial as follow:

$$.5(-\$100) + .5(\$0) - \$20 = -\$70.$$

Because a trial requires no cooperation from the other party, defendant's expected value of trial equals her threat value.

The sum of the threat points equals the noncooperative value of the game:

$$\text{noncooperative value} = \$30 - \$70 = -\$40.$$

If the parties settle out of court, the plaintiff will receive the settlement, denoted *S,* and the defendant will lose *S*. In addition, each side will pay settlement costs equal to $1. Thus, we compute the cooperative value of the game as follows:

$$\text{cooperative value} = +\$5 - \$1 - \$5 - \$1 = -\$2.$$

Finally, the cooperative surplus equals the difference between the noncooperative value of the game and its cooperative value:

$$\text{cooperative surplus} = -\$2 - (-\$40) = \$38.$$

Notice that the cooperative surplus equals the difference between the joint costs of settling (−$2) and the joint costs of litigating (−$40). Thus, the savings in transaction costs from settling creates the cooperative surplus.

Now let us compute the reasonable settlement of this dispute. A reasonable settlement gives each party a payoff equal to his or her threat value plus an equal share of the surplus. The plaintiff's threat value equals $30. Half of the surplus equals $19. Therefore, a reasonable settlement gives the plaintiff a payoff equal to $49. To achieve this payoff, the defendant should pay $50 to the plaintiff, and then the plaintiff must pay settlement costs equal to $1, leaving the plaintiff with a net gain of $49.

Now we repeat this computation for the defendant. The defendant's threat value equals −$70. Half of the surplus equals $19. Therefore, a reasonable settlement gives the defendant a payoff equal to $-\$70 + \$19 = -\$51$. To achieve this payoff, the defendant should pay $50 to the plaintiff, and then the defendant must pay settlement costs equal to $1, leaving him with $49.

Now we relate the reasonable settlement to the expected judgment. The *expected judgment* from a trial equals the actual judgment multiplied by its probability. In Figure 10.4a, the expected judgment from the trial equals $(.5)(\$100) = \$50$. The reasonable settlement also equals $50. Thus, the reasonable settlement replicates the expected judgment in this example.

Recall our simple measure of social costs as the sum of administrative costs and error costs. When the settlement replicates the expected judgment, a settlement uses lower transaction costs to achieve the result as expected at trial. Thus, the administrative costs are lower, and the error costs are the same. Therefore, *a settlement that replicates the expected judgment at trial usually reduces social costs.* Given this fact, the law should encourage settlements that replicate the expected judgment. By doing so, the law can achieve the same results as trials while lowering social costs.

This important conclusion raises the question, "When does the reasonable settlement equal the expected judgment at trial?" The preceding example produces this result because the defendant is the mirror image of the plaintiff. In general, *the reasonable settlement equals the expected judgment at trial when (1) the plaintiff and defendant have the same expectations about the trial, and (2) the plaintiff and defendant bear the same transaction costs to resolve the dispute.* We will develop an example to show the truth of this proposition, which is fundamental to the analysis and design of legal procedures.

B. No Settlement

Earlier we explained that relative optimism causes trials. Let us use bargaining theory to develop this argument. Consider how the reasonable solution changes in the preceding example if the expectations about trial diverge for the two parties. To keep the example simple, assume that the plaintiff expects to win at trial with probability .8. Consequently, the plaintiff's subjective threat value equals

$$.8(\$100) + .2(\$0) - \$20 = \$60.$$

The defendant's expectations remain unchanged, so she expects to lose $70 at trial. We compute the cooperative surplus as follows:

$$\begin{aligned} \text{cooperative surplus} &= \text{cooperative value} - \text{noncooperative value} \\ &= +\$5 - \$1 - \$5 - \$1 - (\$60 - \$70) \\ &= \$8. \end{aligned}$$

A reasonable settlement gives the plaintiff a payoff equal to his threat value plus an equal share of the surplus: $60 + $4 = $64. For the plaintiff to receive a net payoff of $64, the defendant should settle for $65, from which the plaintiff will pay $1 in settlement costs. (Can you show that $65 is also a reasonable settlement from the defendant's viewpoint?[14])

In this example, the plaintiff expects to win at trial with probability .8, whereas the defendant expects to lose at trial with probability .5, so the plaintiff is relatively optimistic. In bargaining together, the parties may agree to disagree on these probabilities, and to compute resulting gain from cooperation. The computation of the surplus from cooperation as perceived by the parties can be called the "putative cooperative surplus"—that is the surplus that they impute to cooperating, given that they do not agree about their prospects at trial. Notice that the plaintiff's relative optimism reduced the putative cooperative surplus from $40 to $8. *If relative optimism reduces the putative cooperative surplus below zero, then settlement cannot occur.*

To illustrate this fact, assume that the plaintiff expects to win at trial with probability 0.95. Consequently, the plaintiff's *subjective* threat value equals

$$.95(\$100) + .05(\$0) - \$20 = \$75.$$

The defendant's expectations remains unchanged; so, he expects to lose $70 at trial. We compute the putative cooperative surplus as follows:

$$\begin{aligned} \text{putative cooperative surplus} &= \text{cooperative value} - \text{noncooperative value} \\ &= +\$5 - \$1 - \$5 - \$1 - (\$75 - \$70) \\ &= -\$7. \end{aligned}$$

Because cooperation produces a negative putative surplus, both parties prefer a trial. Settlement cannot occur because each party expects to gain more from a trial than he

[14] The defendant's subjective threat value equals −$70; half the surplus equals $4; so the defendant's payoff when settling should equal $66. To achieve this payoff, the defendant pays $65 to the plaintiff, and he pays settlement costs of $1.

could gain by a settlement acceptable to the other side. (Can you compute the "reasonable settlement" from the plaintiff's viewpoint, and show that the defendant would not agree to it?[15])

This example illustrates that relative optimism about trial can overwhelm the savings in the cost of litigating. We can state the relationship precisely. Relative optimism is measured by the difference in the expected judgment of the two parties, which we write ΔEJ. By settling, the parties save the difference in costs between litigating and settling, which we write $LC - SC$. *The expected surplus from settling becomes negative, making trial inevitable, when relative optimism exceeds the difference in costs between litigating and settling*:

$$\Delta EJ > LC - SC \rightarrow \text{trial}.$$

QUESTION 10.9: Assume that litigation will cost the plaintiff \$100 and the defendant \$100. Assume that settling out of court is free $(SC = \$0)$. What is the largest value of relative optimism (ΔEJ) at which the parties can still settle out of court?

V. Trial

Having analyzed bargaining to settle out of court, we move to the next stage in Figure 10.1 and analyze trials. Different countries organize trials differently. For example, as we have noted above, the judge serves as a neutral referee in common law countries ("the adversarial process"), whereas the judge actively develops the case in European countries ("the inquisitorial process"); European countries have specialized courts (civil, administrative, labor, social, constitutional), whereas the common law countries rely more on courts of general jurisdiction; American civil trials usually involve juries, whereas civil trials in most other countries do not; American lawyers prepare their witnesses, whereas some countries limit the contact between witnesses and lawyers before the trial; and European countries sometimes allow evidence that American courts exclude.[16]

These are just some of the many differences in trials in various countries. Most differences in trials have not been analyzed as yet using economic models. Consequently, we can only sketch the contours of some differences and then consider a few formal models.

Before we analyze trials, consider alternatives to them. Trials are very expensive everywhere. The notorious cost of litigation has generated countless lawyer jokes that

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[15] A reasonable settlement gives the plaintiff a payoff equal to his threat value plus an equal share of the surplus: \$75 − \$3.50 = \$71.50. Therefore, the defendant must settle for \$72.50, from which the plaintiff will pay \$1 in settlement costs and receive a net payoff of \$71.50. However, the defendant expects to lose \$70 at trial. The defendant will never agree to a settlement that makes her worse off than a trial.

[16] For a fascinating comparison to the status and practices of judges in the United States. and Europe, see J. MARK RAMSEYER & ERIC B. RASMUSEN, MEASURING JUDICIAL INDEPENDENCE: THE POLITICAL ECONOMY OF JUDGING IN JAPAN (2003).

circulate on the Internet (Q: Why don't sharks attack lawyers? A: Professional courtesy. See the Cooter/Ulen website for more jokes like this one.) Costs come in three kinds:

Fees—Lawyers command high fees in many countries, partly because of the bar's monopoly power, its specialized training and licensure, and its privileged access to legal officials. Legal fees increase further where corruption makes bribery a routine part of the legal process.

Delays—Chinese courts dispose of most cases within a year; in Los Angeles it takes around three years to bring a case to the Superior Court, and resolving a court case in India can take a decade. (Besides trials, waiting in long lines plagues many services that the state supplies below cost, such as lines of commuters on the highway and lines of people to get government permits to drive or emigrate.)

Uncertainty—Lack of clarity in law and uncertainty about how a court might resolve an issue imposes unpredictable costs on people caught in legal disputes.

Given these costs, being drawn into a legal suit is a punishment in itself for the parties, but not their lawyers.[17]

To avoid this punishment, many lawyers earn their living by keeping people out of legal disputes. Thus, commercial lawyers pride themselves on writing tight contracts that anticipate all contingencies and provide for them explicitly and clearly; so, the contract is performed flawlessly, and no one litigates the contract. Unfortunately, even the best contracts sometimes result in litigation. Anticipating this possibility prompts many businesses to search for alternatives to trials and to specify in the contract how future disputes will be resolved. The specified procedures characteristically bypass the public courts and substitute streamlined alternatives. The alternative procedures have the name "alternative dispute resolution" or ADR, which includes various types of mediation and arbitration. The contract, for example, may call for resolving any dispute by arbitration in a particular city, following the rules of a particular arbitration association. For instance, the International Chamber of Commerce in Paris organizes arbitrations for many international businesses. Compared to litigation, arbitration procedures have fewer formalities, weaker procedural rights, and tighter restrictions on appeals. These factors make arbitrations simpler and quicker than trials. Arbitration is also usually secret rather than public, which business prefers.

The Visa credit card corporation offers another interesting example. Visa provides a network connecting banks that issue cards and enrolling merchants to accept Visa cards as payment for goods. Consumers sometimes refuse to pay a disputed bill ("The goods were never delivered"). When this happens, the bank that issued the card to the consumer will try to charge the item's cost back to the bank that enrolled the merchant who sold the disputed goods. This action could result in a legal dispute between the two banks about the responsibility for the item's cost. Such disputes are handled by Visa's Arbitration Committee. The plaintiff has to pay a fee for originating a complaint, and

[17] Joke: Litigating is like wrestling with a pig: You both get dirty, and the pig enjoys it.

both parties submit written accounts of the facts. The committee decides on the basis of these documents, without ever meeting with the disputants. When the committee announces its decision, the loser pays the judgment and also the costs of arbitration. There are no lawyers, no detailed legal procedures, and no face-to-face encounters between disputants.

The burdensome procedures followed by public courts are designed to ferret out the truth while protecting the rights of the parties. The Visa members could have adopted these public-court procedural rules for resolving their disputes but chose not to. The fact that Visa members voluntarily abandon most procedural rights suggests that the rights' costs exceed their benefits to Visa members.

When both parties to the contract are businesses, as with the banks in the Visa system, terms calling for the arbitration of disputes are relatively unproblematic. More problems arise, however, when one party is a business and the other is a consumer. Health maintenance organizations in the United States sometimes stipulate that disputes between patients and doctors will be resolved by compulsory arbitration. The apparent aim is to reduce the cost of medical malpractice insurance. Similarly, many contracts for the delivery of goods specify that disputes will be resolved by compulsory arbitration according to the rules of the American Arbitration Association, and that arbitration will occur in the home city of the seller. This is an attempt by sellers to avoid the high cost of defending themselves in remote places. Until a dispute arises, however, the consumers who sign these contracts are often unaware of the arbitration clause or unappreciative of its significance. Given ignorant consumers, businesses can often stipulate arbitration procedures and arbitration organizations that favor business (the repeat customer) and disfavor consumers (one-shot buyers).

Web Note 10.2

See our website for a summary of the burgeoning literature on the economics of mediation and arbitration.

A. Independence vs. Alignment

Now we begin to analyze trials. First, let us contrast the role of a judge who actively develops the case in an attempt to find the truth with the role of a judge who passively referees the dispute. Our aim is to determine the optimal activism of judges. The difference in the role of the judge parallels a difference in the role of lawyers. When the judge actively develops the case, the lawyers must respond to the judge, a practice that reduces the scope of lawyers to develop their own arguments. In contrast, when the judge passively referees the dispute, the lawyers have more scope to develop their own arguments. So, the difference between the inquisitorial and adversarial systems partly concerns the allocation of effort between judges and lawyers.

We will evaluate the role of judge and lawyer in terms of the incentives faced by each. Like other professionals, lawyers pursue their self-interest by selling their services. In one of social science's most famous metaphors, Adam Smith described the

participants in a competitive market, who consciously pursue their private interests, as directed by an "invisible hand" to serve the public good. According to Smith, competitive markets align private and public interests. The market for lawyers ideally works this way. Within the context of law, professional ethics, and morality, self-interest ideally directs lawyers to pursue the best interests of their clients. By pursuing the best interests of their clients, lawyers help courts to reach toward an ideal outcome of disputes, which we described as the "perfect-information judgment."

As explained, the incentive structure for lawyers ideally aligns self-interest and the public interest. In the old phrase, lawyers can "do good by doing well." The incentive structure for judges, however, is very different from that of lawyers. Bargains among lawmakers yield laws, and bargains among citizens yield contracts. To facilitate cooperation, the parties involved in bargaining need an independent interpreter of their agreements. To achieve independence, the interpreter's wealth and power must be unaffected by the interpretation. The state can supply an independent interpreter of laws and contracts by creating an independent judiciary. Instead of aligning public and private interests, independence severs the link between the judges' decisions and their own wealth or power. Independence requires shielding the judge's promotion, tenure, transfer, salary, and budget.

Different countries secure the independence of judges by different means. In civil law countries, judges are civil servants in a hierarchical bureaucracy. Their hiring and promotion prospects depend upon the evaluation of their performance by their superiors, who are senior judges and other senior civil servants, who often constitute judicial counsels or judicial commissions. Thus, the independence of the judiciary in Europe and Latin America depends upon the insulation of the judicial bureaucracy from private disputes in society. In contrast, American judges in federal courts and most higher state courts are political appointees, not civil servants.[18] Promotion to a higher court in America is extremely unpredictable. Once appointed to a high court, however, American judges enjoy long and secure tenure (life tenure for federal judges), and politicians are prohibited from communicating with sitting judges. Appointment to the bench is usually the capstone of a lawyer's career. Thus, the independence of American judges rests upon the fact that, after they have been appointed, politicians and administrators have no continuing influence.[19]

With judicial independence, the outcome of a case decided by a judge does not affect his or her wealth or power. It costs judges no more to do what they think is right than to do what they know is wrong. Consequently, independent judges might just as well follow their own inner lights concerning the right and the good. (English judges changed their behavior in the late eighteenth century when they began to receive a

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[18] Different states have different rules for selecting high court judges. For example, in California, the governor appoints judges to the California Supreme Court, but, after being appointed, a judge must be confirmed by a majority of Californians voting in the next regularly scheduled general election. In Illinois, justices of the intermediate appellate courts and of the supreme court are elected from districts determined by the state legislature. In approximately half of the states, judges at all levels are elected to office, and in the other half, they are appointed by the state's governor, often with the advice and consent of the upper house of the state legislature and then later subject to retention elections.

[19] For a fascinating comparison to the status and practices of judges in the United States. and Japan, see Ramseyer & Rasmusen, supra n. 16.

salary from the state instead of being paid by fees collected from the litigants.[20]) In addition, independent judges gain nothing material from devoting more effort to a case. Thus, we expect judges to use their independence to make their lives easy and pleasant.

As a glib summary, we could say that judges have incentives to do what is right and easy, whereas lawyers have incentives to do what is profitable and hard. This perspective suggests how to analyze the optimal activism of judges. Transferring responsibility for developing the case from lawyer to judge increases independence and decreases motivation. The greater activism of the judge in the inquisitorial system brings more independence to finding facts and interpreting laws, whereas the increased scope for lawyers in the adversarial system brings more vigor to the search for facts and arguments. The box below restates this argument in the language of statistics.

An analysis of juries resembles an analysis of judges. As with judges, the legal system tries to make jurors independent, so that they do what is right. Unlike judges, jurors are *required* to serve and their compensation is nominal. According to data from the National Center for State Courts, jury compensation varied across states from a high of $42.20 per day in New Mexico to $0 in several states. (When Robert Cooter was called to jury duty in California, the summons recommended parking in the official parking lot, where the daily fee exceeded the per diem paid to jurors!) As with most forced labor, the U.S. system is extremely wasteful with the time of jurors. Other legal systems use jurors or something similar within a different institutional framework. For example, the juvenile courts in Munich, Germany, include "lay judges" without legal training who serve for several years at modest pay and decide cases in panels

Information Theory Applied to Judging

Let x denote a variable relevant to a legal dispute. Let x^* denote the true value of the variable x. The court seeks the truth, but the court observes x^* with error ϵ, where ϵ is a random variable. Thus, the court observes $x^* + \epsilon$. The expected value of the court's observation is denoted $E(x) = x^* + E(\epsilon)$, where $E(\epsilon)$ equals the average or mean error. If the mean error is zero, $E(\epsilon) = 0$, then the court's expected observation is accurate: $E(x) = x^*$. If the expected error is not zero, say, $E(\epsilon) = 10$, then the court's expected observation is biased. If the variance of ϵ is large, then the court's observation is *erratic*.

The self-interest of lawyers causes them to conduct a diligent, biased search for information, whereas the independence of judges causes them to conduct a lax, unbiased search. Thus, lawyers tend to make biased observations of x with low variance, whereas independent judges tend to make unbiased and erratic observations of x.

[20] The fee system incentivized judges to attract cases to their courts by deciding them in favor of plaintiffs. Replacing fees with a salary from the state resulted in fewer pro-plaintiff decisions and more pro-defendant decisions. Daniel Klerman, *Jurisdictional Competition and the Evolution of the Common Law*, 74 U. CHI. L. REV. 1179 (2007).

with professional judges. Jurors and lay judges tend to give more weight to social norms, which they know, and less weight to formal law in deciding cases. (Later in this chapter we discuss the role of social norms in the evolution of law.) In addition, a large jury affords some protection against corruption because bribes and threats are more likely to succeed when concentrated rather than dispersed.

QUESTION 10.10: Compare the incentives of the judge and the lawyers with respect to the time allocated to a trial.

QUESTION 10.11: Bribing or intimidating the court is a persistent worry in trials. The use of juries is often justified on the ground that corrupting the jury is more difficult than corrupting a judge. Why might this be true?

B. Should the Loser Pay All?

In Britain, fewer disputes go to trial than in the United States. And in Britain, the loser of a lawsuit must pay the litigation costs of the winner, whereas in the United States, each party ordinarily pays its own litigation expenses. Some people believe that the British rule of "loser pays all," which is also the rule in much of Europe, causes fewer trials than the American rule of "each pays his own." However, other important differences between British and American trial practices could account for the difference in litigation rates in the two countries.[21] To evaluate the claim that "loser pays all" causes less litigation than "each pays his own," we contrast the incentive effects of the two rules.[22]

Most civil disputes involve two issues: liability and damages. The expected judgment equals the probability of liability multiplied by the damages. For example, in a medical malpractice case, the plaintiff may expect to lose with probability .9 and to win $10 million with probability .1, thus yielding an expected judgment of $1 million. In this example, the rule of "each pays his own" causes the plaintiff to pay his or her own legal costs in all cases. In contrast, the rule of "loser pays all" causes the plaintiff to pay no legal costs with probability .1 and to pay the legal costs of both parties with probability .9. In suits with low probability that the plaintiff will win, a rule of "loser pays all" increases the expected costs of the plaintiff relative to a rule of "each pays his own." In general, *the rule of "loser pays all" discourages suits with low probability that the court will find liability.* (Suits discouraged by this rule include nuisance suits and also suits where the plaintiff has uncertain proof of a legitimate grievance.)

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[21] For example, the British bar (and other national legal professions) is split into solicitors and barristers, contingency fees are not allowed in Britain, and civil trials in Britain have no juries (except in libel cases). The first two of these distinctions are disappearing.

[22] For a different view from ours about the effect of these fee shifting rules, see John J. Donohue III, *Opting for the British Rule, or If Posner and Shavell Can't Remember the Coase Theorem, Who Will?,* 104 HARV. L. REV. 1093 (1991). Professor Donohue argues that the rule for attorney fee compensation is a default rule away from which the parties can bargain as part of a settlement. So, it does not really matter, he argues, to efficiency whether the default rule is the American rule or the English rule. The parties will bargain to whatever assignment of fees is mutually satisfactory.

Now consider cases in which the probability of liability is closer to .5. Earlier we explained that the simplest cause of trials is relative optimism of the parties. For example, settlement out of court will be difficult if the plaintiff believes the court will find liability with probability .6, whereas the defendant believes the court will find liability with probability .4. From this example, it is easy to see that the rule of "loser pays all" aggravates the problem of relative optimism. Under a rule of "each pays his own," each party in this example expects to bear its own litigation expenses in the event of a trial. In contrast, under a rule of "loser pays all," each party expects to escape bearing any litigation expenses in the event of a trial with probability .6. *When the parties' estimated probability that the court will find liability for the plaintiff is not low, the rule of "loser pays all" generally encourages trials caused by false optimism.*

We have been discussing suits over liability. In some disputes, liability is conceded by the defendant, and the parties contest damages. In these cases, both parties agree that the plaintiff will win something at trial, but they disagree about how much the plaintiff will win. When applying the rule "loser pays all" to these cases, the plaintiff does not automatically "win" just because the defendant concedes liability. Instead, the definition of the "winner" depends upon how much the plaintiff wins. To illustrate, consider an example: Suppose Joan Potatoes demands $600 as her share of the car valued at $1000 in her divorce with her husband, Joe. Some American courts recognize an institution called "offers to compromise," which, in effect, adopts the loser-pays-all rule.[23] Under this institution, Joan's offer to settle for $600 will be recorded at the courthouse. If Joe rejects the offer, and a trial occurs, the winner is determined by whether the court awards Joan more or less than $600. Joe will pay most of Joan's court costs if the court awards Joan more than $600, whereas Joan will pay most of Joe's court costs if the court awards Joan less than $600. *In disputes that concede liability and contest damages, the "winner" can be defined by the difference between the last offer to settle and the court judgment*.

Notice that the effect of this institution is to penalize hard bargaining. Under the rule of "loser pays all," demanding more increases the probability that she will pay the litigation costs of the other party. To see why, assume that Joan increases her demand from $600 to $601. As a result, she gains an additional $1 in the event of a settlement, but she increases the risk that she will pay all of Joe's litigation costs in the event of a trial. *In disputes that concede liability and contest damages, the rule of "loser pays all" discourages trials by penalizing hard bargaining*.[24]

QUESTION 10.12: Assume that the plaintiff demands $1000 to settle, the defendant rejects the offer, and the jury awards $900 at trial. Who "won" for purposes of the rule "loser pays all"?

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[23] Each state has its own rules. In federal court in the United States, Rule 68 prescribes a form of "offers to compromise," although it is "asymmetrical" as opposed to the "symmetrical" form that we describe above. In general, the American forms of "loser pays" do not shift *all* the costs of litigation.

[24] Note that in disputes that concede liability and contest damages, the rule of "loser pays all" encourages trials caused by false optimism.

QUESTION 10.13: Assume that the plaintiff demands $1000 to settle, the defendant offers $600, and the jury awards $900 at trial. Extend the definition of "winner" and "loser" to this case for purposes of applying the rule "loser pays all."

QUESTION 10.14: Recall that, according to one definition, a nuisance suit has no merit in the sense that the plaintiff's expected judgment is zero. Will there be more nuisance suits under the rule of "each pays his own" or "loser pays all"?

QUESTION 10.15: The parties to a suit may dispute the fact and extent of liability. Disputes over whether the defendant was liable often have no scope for compromise, whereas disputes over the magnitude of damages have scope for compromise. Explain why the rule of "loser pays all" may cause parties to resolve most disputes over the extent of liability but not the fact of liability.

QUESTION 10.16: Assume that both parties to a legal dispute are averse to the risk of losing at trial. Would risk-averse parties be more inclined to settle out of court under a rule of "each pays his own" or "loser pays all"?

QUESTION 10.17: Suppose "loser pays all" is more efficient than "each pays his own." In a jurisdiction that follows "each pays his own," the Coase Theorem would predict that the two parties would sign a contract requiring the loser to reimburse the winner, thus adopting the more efficient rule by private agreement. Give some economic reasons why this does not occur in fact.

VI. Appeals

Many court systems consist of a hierarchy of courts in which a discontented litigant can appeal the decision of a lower court and request a hearing before a higher court. Sometimes the higher court *must* accept the appeal and hear the case (the parties may appeal "as of right"), and sometimes the higher court can *choose* whether to accept the appeal or reject it (the court has "discretionary review"). For example, U.S. federal courts consist of three levels in which the highest court (the U.S. Supreme Court) can decide whether to accept or reject most appeals from the intermediate court (a circuit court of appeals), and the intermediate court must accept appeals from the lowest court (a district court). In some countries (but not in federal or state courts in the United States) the appeals courts can hear the entire case from the beginning ("trial de novo"). For example, appeals courts in continental Europe often hear cases from the beginning, considering matters of fact and law. Sometimes, however, the appeals court considers some issues but not others. For example, the appeals courts in common law countries usually limit consideration to matters of law, accepting without reviewing all the facts found by lower courts.

Appeals courts have two distinct functions. First, they correct mistakes in decisions made by lower courts. Second, they make law, either directly as in common law or indirectly through the interpretation of statutes. We will consider each function of appeals courts in turn.

A. Correcting Mistakes

Hierarchical court systems enable the highest judges to monitor the performance of lower judges and correct their mistakes at low cost. The system of appeals keeps monitoring costs low because litigants typically appeal when the lower court makes a mistake. Thus, a system of appeals enables the highest judges to draw upon the private information of litigants about whether a mistake was made by a lower court. By using this information, a system of appeals can reduce the sum of administrative costs and error costs in deciding disputes.

To illustrate, consider a numerical comparison of a system without appeal and a system with appeal. Assume that a trial costs the plaintiff and defendant $500 each, for a total of $1000 in administrative costs. Assume the probability of an error by the trial court in deciding the case equals .2 and the social costs of an error equal $25,000. Thus, the social cost of deciding the dispute in the trial court is

$$\text{Social cost} = \underset{\text{administrative costs}}{\$1000} + \underset{\text{expected error costs}}{.2(\$25{,}000)} = \$6000.$$

Now consider how the creation of an appeals court affects social costs. Assume for now that the case is appealed if, and only if, the trial court made an error. Assume that an appeal costs each party $1000, for a total of $2000 in administrative costs. The appeals court is likely to reverse the trial court when the latter made an error. Specifically, let .9 equal the probability of reversal conditional on an error by the trial court, which implies that the probability of the appeals court's sustaining an error made by the trial court equals .1. The social cost of deciding the dispute in a court system with the possibility of appeal is

$$\begin{aligned}\text{Social cost} = {} & \underset{\substack{\text{administrative}\\ \text{cost of first trial}}}{\$1000} + \underset{\substack{\text{probability}\\ \text{of appeal}}}{.2} \left[\underset{\substack{\text{admin. cost}\\ \text{of 2nd trial}}}{\$2000} + \underset{\substack{\text{expected}\\ \text{error cost}}}{.1(\$2{,}000)}\right] \\ = {} & \$1900.\end{aligned}$$

In this example, the existence of an appeals court causes social costs to fall from $6000 to $1900.

A rational litigant does not appeal a case unless the expected value of appealing exceeds its cost. The expected value of appealing is high when the appeals court is likely to reverse the decision of the trial court. The appeals court is likely to reverse when the lower court makes an error. Thus, appeals courts are most likely to lower social costs (1) when the appeals court is more likely to reverse an error by the lower court than to reverse a correct decision, and (2) when this behavior by the appeals court

causes litigants to appeal errors with higher probability than the probability of appealing correct decisions by the lower court.

QUESTION 10.18: By setting fees for appealing, the state can discourage appeals with low probability of success. Construct a numerical example to illustrate this fact.

QUESTION 10.19: Appeals are often subsidized in the sense that the state bears part of the litigation costs. Use the preceding theory to construct a justification of state subsidies for appeals.

QUESTION 10.20: Assume that delay is more costly to the plaintiff than the defendant. How does the possibility of appealing an adverse court decision, which delays resolution of the case, affect bargaining between the parties to settle the dispute out of court?

B. Efficiency of the Litigation Market

Now we turn from correcting mistakes to making law. A trial imposes substantial costs on the state, including the cost of the court building and the salaries of the judge, court stenographer, bailiff, and various assistants. Unfortunately, courts keep poor accounts, and we know of no authoritative estimate of the cost to the state of an hour spent on a trial in an American court (although we will propose one in the second part of the next chapter). Apparently no one knows how much of the state's cost of a trial is a subsidy and how much is recouped from the parties to the dispute in the form of court fees assessed against them.

While no one knows how large the subsidy is, we can say something about how large it ought to be. Deciding disputes and making laws differ in this respect: A decision mostly affects the plaintiff and defendant, whereas a new, generally accepted precedent affects many people. This difference is fundamental to the economics of trials. When an appeals court decides a matter of law, the precedent affects many people other than the parties to the dispute. Because the parties to the dispute do not internalize most of its effects, they should not pay most of its costs. The state should subsidize appeals on matters of law because of the public value of precedent. This argument does *not* apply to deciding disputes that mostly affect the plaintiff and defendant. When the law is settled and the dispute concerns the facts, the effects of its resolution do not go beyond the parties. Consequently, the case for subsidizing trials to resolve private disputes is much weaker than the case for subsidizing trials to make law.

How beneficial to the public is judge-made law? We will discuss some theories that try to answer this question by focusing on whether legal precedents evolve toward efficiency. Some social goals can be achieved without government's pursuing them. Recall that Adam Smith argued that competitive markets often cause people who consciously pursue their private interests to serve the public good. A competitive market is a kind of social machine whose laws of operation allocate resources efficiently without anyone's consciously striving for that goal. Litigation has some elements of a competitive market; specifically, plaintiffs and defendants compete with each other to advance

their own ends. Are courts like competitive markets in the sense that judge-made law tends toward efficiency without anyone's consciously striving for this goal?

The economic analysis of law has investigated the inspiring possibility that litigation can make the law more efficient without the conscious help of judges. This might occur through what is called *selective litigation*. Assume that inefficient laws are litigated more than efficient laws. (In a moment we shall explain why that might occur.) By assumption, inefficient laws are repeatedly challenged in court, whereas efficient laws are challenged less frequently. If efficient laws are not favored or disfavored by judges, the probability of a law's surviving a court test is independent of whether it is efficient or inefficient. But we are assuming that inefficient laws are challenged in court more often than efficient laws. These two assumptions—that efficiency is negatively correlated to the probability of a court test and that efficiency is not negatively correlated to the probability of a law's surviving such a test—are sufficient to cause the law to evolve toward efficiency.

Under these assumptions, selective litigation works like a strainer that catches inefficient laws while allowing efficient laws to slip past. The law, being repeatedly sieved, becomes more efficient with the passage of time. The process of filtering out inefficient laws could operate without judges' consciously favoring efficiency; indeed, it is sufficient for judges not to disfavor efficiency. In order for selective litigation to cause the law to evolve toward efficiency, selection must be biased against inefficient laws.

Is there any reason to think that inefficient laws will be challenged in court more often than efficient laws? The answer is "yes," but this is not a strong yes—more like a "probably." To see why, consider that inefficient laws allocate entitlements to the wrong parties. Return to Example 3 from the beginning of this chapter, which concerned the division of property in a divorce. Suppose that Joan Potatoes and Joe Potatoes place different valuations upon their house. Joan values it at $150,000, and Joe values it at $100,000. Efficiency requires the allocation of legal entitlements to the parties who value them the most; so, efficiency requires Joan to get the house. If Joan gets the house, the value to Joe of overturning that allocation equals $100,000. In contrast, if Joe gets the house, the value to Joan of overturning that allocation equals $150,000. Because Joan has more at stake than Joe, Joan would be more likely than Joe to challenge an unfavorable legal allocation. In general, the party who values a legal entitlement the most will spend more on a suit to obtain it than anyone else. So, an inefficient allocation of an entitlement will provoke more expenditure on litigation than will an efficient allocation.

More money will be spent challenging inefficient laws than challenging efficient laws. More will be spent extensively and intensively; more extensive litigation means more frequent challenges in court; more intensive litigation means that the plaintiffs hire more expensive lawyers and spend more on preparing the case. Insofar as expenditures improve the quality of the argument in court and insofar as courts are influenced by arguments of higher quality; litigation against inefficient laws will tend to be more successful than litigation against efficient laws.

We have argued that litigation selects against inefficient laws, resulting in more frequent court challenges and better preparation of plaintiffs' cases. Thus, a mechanism in the common law works similarly to the "invisible hand" in markets. Unfortunately,

the invisible hand guides courts weakly compared to its guidance on markets. To understand why, consider an analogy between legal precedents and scientific discoveries. Some scientific advances, including the discovery of basic principles, are unpatentable. Insofar as scientific advances are unpatentable, investors in research cannot capture its full value to society. Part of the value spills over, which constitutes an externality. Markets for basic scientific discoveries may fail because value spills over, unlike, say, the market for bananas, where the grower captures the product's full value.

Trials have more in common with basic scientific research than with the market for bananas. A law is, by its nature, general in the scope of its application; so, challenging a law affects everyone who is subject to it. The effects of a new, more efficient precedent spill far beyond the litigants in the case in which the precedent is set. Consequently, most plaintiffs appropriate no more than a fraction of the value that a new precedent creates and redistributes. Other beneficiaries free-ride on this plaintiff's success. Consequently, litigation selects against rules whose costs are internalized by a single plaintiff. Free-riding is more powerful than inefficiency in channeling litigation pressure.

QUESTION 10.21: The plaintiff who brings a suit to establish a more efficient precedent enjoys only a fraction of its social value. Does this fact show that the government should subsidize lawsuits by paying part of the cost of litigation?

QUESTION 10.22: What features of the inquisitorial system might attenuate the pressure of selective litigation as compared to the adversarial system?

C. Enacting Social Norms

We have asked whether competition in the litigation market drives judge-made law toward efficiency. Apparently, competitive pressures toward efficiency are present but weak in the litigation market. Economic analysis of law has demonstrated more consistency between the common law and efficiency than anyone anticipated when the intellectual enterprise first began in the 1960s. The degree of consistency far exceeds what could be expected from competitive pressure in the litigation market. Besides litigation pressure, another possible cause of efficiency is competition among "social norms," by which we mean norms that arise outside of the legal system. Norms arise in communities where people interact repeatedly. Social norms compete for peoples' allegiance, and, under certain conditions, the more efficient norms win the competition. Judges sometimes enforce social norms. If judge-made law evolves in the same direction as social norms, then competition in the "market for norms" will drive judge-made law toward efficiency.

The traditional account of the "law merchant" provides an example. Medieval merchants engaged in a variety of commercial practices, such as paying each other with bills of exchange.[25] These practices sometimes competed against each other,

[25] A "bill of exchange" is, in essence, a formal enforceable promissory note. These bills, originally given by a debtor to his creditor, might then be passed on by the creditor to *his* debtors in settlement of obligations. In some communities these bills became a *de facto* currency.

and the more efficient ones prevailed. A practice that prevailed was raised to the level of an obligation among merchants. These obligations constituted the social norms of the community of medieval merchants. The merchants in the medieval trade fairs of England developed their own courts to regulate trade. As the English legal system became stronger and more unified, English judges increasingly assumed jurisdiction over disputes among merchants. The English judges often did not know enough about these specialized businesses to evaluate alternative rules. Instead of making rules, the English judges then tried to find out what rules already existed among the merchants and selectively enforced them. Thus, the judges dictated conformity to merchant practices, not the practices to which merchants should conform. The law of notes and bills of exchange in the eighteenth century especially exemplifies this pattern.[26]

The model of the law merchant once enjoyed a special place in the philosophy of law. According to an old theory of jurisprudence, courts should *find* the common law, not *make* it. Judges find the common law by identifying social norms and selectively raising them to the level of law. When judges follow this pattern, the common law has the authority of custom behind it. This philosophy is not limited to common law. The makers of legal codes often follow this philosophy. For example, Karl Llewellyn, the scholar who directed the creation of America's most successful code, *The Uniform Commercial Code,* explicitly identified the best business practices and wrote them into the code. Similarly, the creators of the great European codes often tried to identify and enact the best business practices of the day.

We now live in an age of a new law merchant. The modern economy creates many specialized business communities and norms arise in them to coordinate the interaction of people. The formality of the norms varies from one business to another. Self-regulating professions, like law and accounting, and formal networks like Visa promulgate their own rules. Voluntary associations, like the Association of Home Appliance Manufacturers, may issue guidelines. Informal networks, such as the computer software manufacturers, may have inchoate ethical standards. All of these social norms provide a rich source for decentralized law making by judges. As the economy develops and becomes more complex, social norms should become more important as a source of law.

We stated that social norms compete for people's allegiance, and, under certain conditions, the more efficient norms win the competition. Economists have begun to study social norms in an attempt to understand when they evolve toward efficiency. A short answer is that social norms evolve toward efficiency when they coordinate the

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[26] The extent to which the medieval law merchant was substantive, rather than procedural, is disputed, and its relationship with common law and admiralty law is difficult to reconstruct. The process of assimilating bills of exchange and negotiable instruments into the common law, which occurred in the eighteenth century, is well documented. The traditional theory is developed by JAMES W. HOLDEN, HISTORY OF NEGOTIABLE INSTRUMENTS IN ENGLISH LAW (1993). Holden is criticized by John Baker in *The Law Merchant and the Common Law Before 1700,* 38 CAMBRIDGE L. J. 295 (1979).

behavior of people in long-run relationships and when the effects of the norms do not spill over to other people.

QUESTION 10.23: Central planning was the method used in the communist system for making commodities. It failed because the planners lacked the information and motivation to direct an increasingly complicated economy. Instead of being inevitable, socialism proved to be impossible. Making laws is not so different from making commodities. Contrast centralized and decentralized ways of making laws.

Web Note 10.3

There is now a large and fascinating literature on the relationship between social norms and law. For references, links, and summaries, see our website.

D. Efficiency as a Judicial Motive

We have asked whether judge-made law tends toward efficiency without anyone's consciously striving for it. We found a weak pressure toward efficiency in the litigation market and a stronger pressure in the market for norms. What about more conscious forces? Do judges consciously adopt efficiency as a goal? Philosophers disagree about whether a judge can properly decide a case on the ground of efficiency. It can be argued, for example, that judges should allocate legal entitlements fairly and that the fair allocation has no systematic connection to an efficient allocation. Despite such arguments, judges often prefer more efficient rules, but their own descriptions employ terms other than "efficiency." The law embeds efficiency principles under other names.

We cannot develop this theory systematically, but we can provide some suggestive examples. We have argued repeatedly that efficient incentives require the internalization of costs and benefits by the private decision maker. That is, private decision makers face efficient incentives when they bear social costs. The law often prescribes the internalization of costs. To illustrate, recall our analysis of tort law in Chapter 6. An injurer can avoid harming someone else by taking precaution against accidents. Internalization requires injurers to proceed as if the harm were their own (that is, as if the harm were part of their expected costs). When injurers internalize the cost of the harm, they will balance it against the cost of precaution, as required for economic efficiency. Thus, tort law requires injurers to take precaution as if accidental harm to others were their own. Judges may call this "a requirement that injurers show equal concern for the harms suffered by others as for themselves." But this is simply cost internalization under another name.

Here is another example of courts' using alternative terminology when they decide cases on efficiency grounds: Each dollar the plaintiff receives in a lawsuit must be paid by the defendant, so the immediate effect of the judgment is pure redistribution. Self-interested litigants may have diametrically opposite preferences concerning the distribution

of the stakes. But suppose they look beyond the immediate division of the stakes and consider the future effects of the legal rule that applies to their dispute. Even though they disagree about this case, they may agree over the rule that they would like to use to resolve new disputes that arise in the future.

Consider an example. Negligence rules as they used to operate in the common law countries (when contributory negligence was a complete bar to recovery) were all-or-nothing: Either the plaintiff was entitled to full compensation for the injury, or the defendant was not liable. In recent years many jurisdictions have abandoned all-or-nothing rules in favor of comparative negligence. Under the rule of comparative negligence, each party is responsible for accident costs in proportion to the harm she caused or to her fault. Thus, if the defendant was twice as negligent as the plaintiff, the defendant is liable for two-thirds of the harm.

Suppose that everyone who lives in a jurisdiction governed by an all-or-nothing rule favors changing to comparative negligence. Further, suppose that someone is injured under circumstances in which the current rule puts all the costs on the other party, whereas comparative negligence would split the costs between them. The accident victim will want this dispute resolved by using the current law, even though he, and everyone else, favors resolving future disputes by the new rule of comparative negligence.

In a common law system, a court may take such a case as the occasion to change the law from the old all-or-nothing rule to the new rule of comparative negligence. Good arguments can be made that judges have the power to abandon a rule in favor of an alternative that makes everyone better off in the future. Certainly a court that made such a change would justify it by pointing to the future benefits that everyone will enjoy. The retrospective application of the new rule can be defended on the ground that everyone prefers its prospective application.

An important normative standard in economics is Pareto efficiency. An improvement by this standard makes someone better off without making anyone worse off. When an appeals court adopts a new precedent, one party to the dispute wins and the other loses. A change in which there are some losers is not an improvement by the Pareto standard. So, the Pareto standard in its simplest interpretation does not provide a guide to adjudicating disputes. We have explained, however, that people who disagree about the best rule for resolving their current dispute may yet agree about the best rule for resolving future disputes. If the prospective application of a new rule makes some people better off and no one worse off, we will say that the new rule is an improvement by the *ex ante* Pareto standard.

This modified concept of Pareto efficiency is very valuable in the economic analysis of law. When an appeals court adopts a new rule whose prospective application is better for everyone, the court may be arguing in different language that the new precedent is *ex ante* Pareto efficient.

QUESTION 10.24: In Chapter 6 we explained the Hand rule for determining whether an injurer was negligent. Does the Hand rule require that "injurers show equal concern for the harms suffered by others as for themselves"?

Conclusion

This chapter developed a general theory of the legal process. We defined a simple measure of social costs; we distinguished the stages of the legal process and modeled the incentive effects of different rules at each stage. The next chapter examines more specific topics concerning the legal process and attempts to evaluate its efficiency and fairness.

Suggested Readings

BONE, ROBERT, THE ECONOMICS OF CIVIL PROCEDURE (2002).

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