11 Topics in the Economics of the Legal Process

T HE LEGAL PROCESS is an incentive system that evolved over centuries of tinkering. Its basic logic reduces the injustice from resolving disputes on terms different from those required by the law and the facts. Reducing these legal errors requires costly procedures. The previous chapter developed a simple measure of social costs—the sum of the costs of legal errors and the administrative costs of avoiding them—and applied it to the stages of the legal process. On balance, is the legal process the best instrument for justice or is it unnecessarily cumbersome and expensive?

Most lawyers want to do justice and make money. Lawyers often profit from rules that impose costly procedures, just as the firms in an industry profit by forming a cartel. How can we tell the difference between procedural rules of the legal process that promote justice at reasonable cost and those that increase the earnings of lawyers? To tell the difference, this chapter proceeds through the stages of the legal process and considers specific topics. In Part I, we attempt to assess the consequences of particular process rules for social costs. Then, in Part II, we report on various empirical studies of aspects of the legal process.

I. Complaints, Lawyers, Nuisances, and Other Issues in the Legal Process

This section elaborates on some of the topics that we introduced in the last chapter. We begin with a discussion of what determines the decision to file a legal complaint and proceed through a discussion of the market for legal services, nuisance suits, unitary v. segmented trials, and other issues.

A. Filing Complaints

A lawsuit begins with the filing of a complaint. How does an individual determine whether to file a complaint? What determines the total number of complaints that get filed? Filing of legal complaints should increase with increases in underlying events that cause them, such as accidents, broken promises, invasion of property, and so forth. Filing of legal complaints should also increase with decreases in the cost of filing a complaint, including the cost of hiring a lawyer. Finally, filing of legal complaints should increase with increases in the expected value of the claims. We have identified three immediate causes of the filing of legal complaints:

1. Injuries that trigger disputes,
2. The costs of filing complaints, and
3. The expected values of the claims.

To see these causes at work, consider how an increase in the money damages awarded at trial to successful plaintiffs would affect the filing of legal complaints. An increase in money damages awarded at trial increases the expected value of a trial (*EVT*), which increases the expected value of the legal claim and leads to more claims being filed. To illustrate, assume that an accident victim must pay $501 to go to trial, where he expects to lose with probability .5 and to win $1000 with probability .5; so, the expected value of trial equals $-\$501 - .5(\$0) + .5(\$1000) = -\$1$. The plaintiff is unlikely to file a complaint in this case. If, however, the damages awarded to a successful plaintiff increase to $2000, then the expected value of the trial equals $499, and the plaintiff is likely to file a complaint.

An increase in damages awarded to successful plaintiffs tends to increase the filing of legal complaints by increasing the expected value of trial, but it also has an effect in the opposite direction. Potential defendants can often avoid disputes by avoiding the injuries that cause them. Assume that the damages awarded to successful plaintiffs increase, or if the likelihood of plaintiffs' winning increases, or both, which we summarize by saying that the plaintiffs' *expected damages* increase, potential defendants will take more precaution and thus give potential plaintiffs less opportunity to file legal complaints. Thus, a manufacturer may increase quality control to reduce the number of defects that would expose the company to liability claims by injured consumers.

These considerations suggest a prediction about the connection between the magnitude of damages awarded to successful plaintiffs and the number of legal complaints filed. If damages equal zero, then the expected value of trial is so low that potential plaintiffs seldom file complaints. As damages increase, more potential plaintiffs file complaints. As damages increase further, however, potential defendants respond by giving fewer potential plaintiffs cause for legal action. Eventually a point is reached where the number of complaints begins to decrease as damages increase. Figure 11.1 depicts these facts. The number of suits, which is read off the vertical axis, is largest when the expected judgment, which is read off the horizontal axis, equals a value denoted $\tilde{d}$. The effect of a small increase in damages upon the filing of complaints depends upon whether the starting point is below or above $\tilde{d}$. Below $\tilde{d}$, a small increase in damages increases the number of lawsuits filed. Above $\tilde{d}$, a small increase in damages decreases the number of lawsuits filed.

B. Filing Fees and the Number of Legal Complaints

In the United States, courts charge fees for filing a claim and for each subsequent stage in the legal process. The fees paid by litigants, however, fall short of the total cost

FIGURE 11.1

Suits as a function of damages.

Number of legal complaints filed

0

$\tilde{d}$

Damages awarded by courts
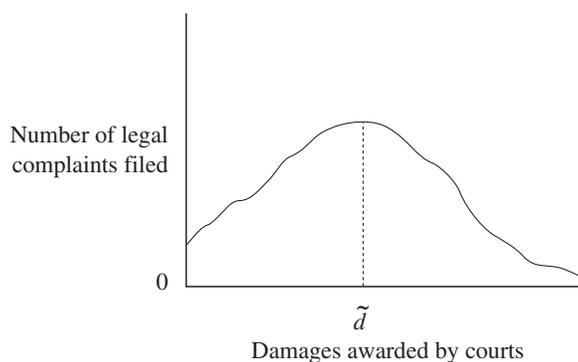
to the state. The taxpayers must make up the difference. As with so many other state subsidies, the extent of this subsidy is unknown because courts do not keep the requisite accounts. In theory, the subsidy could range from almost 100 percent to 0 percent.

Some civil law countries, including Mexico and Chile, interpret the rights of citizens to mean that the state should charge no significant fees for using its courts in civil suits, including fees for filing a claim. In these countries, the subsidy is closer to 100 percent than to 0. Where the litigants pay low fees, the court often spends little on deciding a case, relying primarily on written documents rather than hearing testimony. Also, low fees exacerbate congestion in courts. Conversely, lawyers allege that some jurisdictions set fees to recover the actual cost to the state of using its courts to resolve private disputes, but we cannot find data to confirm these claims.

Here is how a court would use economic principles to set filing fees. The horizontal axis in Figure 11.2 indicates the expected value of the legal claim at the time of filing (EVC), and the vertical axis indicates the corresponding number of potential plaintiffs. Some potential plaintiffs have valuable legal claims and others have worthless legal claims. The line indicating filing costs (FC) partitions the distribution of potential plaintiffs into two groups. For those plaintiffs to the left of FC, the filing cost exceeds the expected value of the legal claim; so, these plaintiffs do not sue. For those plaintiffs to the right of FC, the expected value of the legal claim exceeds the filing cost; so, these plaintiffs sue. Thus, filing costs act as a filter for disputes. High-value disputes pass through the filter and result in lawsuits, whereas low-value disputes are caught by the filter and do not result in suits.

By changing filing costs, officials move the partition in Figure 11.2. Raising the fees charged by the court for filing a legal complaint shifts the boundary in Figure 11.2 to the right and causes the filing of fewer complaints. The minimum value of suits rises. Alternatively, lowering the fees charged by the authorities shifts the boundary in Figure 11.2 to the left and causes the filing of more complaints. The minimum value of suits decreases.

How does the filing of complaints relate to social efficiency? The authorities should set the fees charged by the court for filing a legal complaint to minimize the sum of administrative costs and error costs: $\min[c_a + c(e)]$. The authorities can make calculations to determine whether they should raise or lower the fees for filing a complaint. When making these calculations, the authorities should focus on the marginal case, which is on the boundary between "don't sue" and "sue" in Figure 11.2. For the marginal case, the filing costs equal the expected value of the legal claim, $FC = EVC$.

FIGURE 11.2

Number of suits filed.
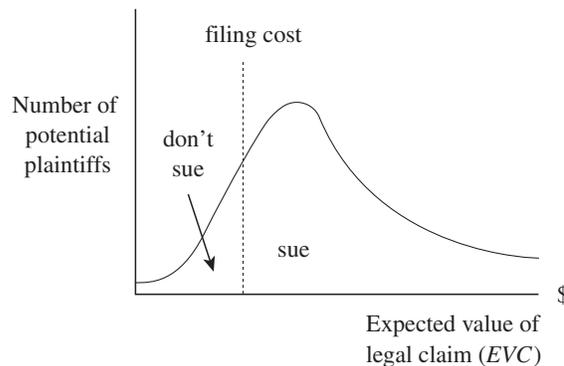
A small increase in the fees charged by courts for filing a legal complaint will cause the marginal plaintiff to drop the suit. Thus, the marginal plaintiff will receive 0 instead of receiving *EVC*. The authorities must compare the resulting savings in administrative costs and the costs of the resulting legal error.

Many constitutions give citizens the right to have a trial to resolve their disputes. In some countries this right is interpreted to mean that trials should be free to the parties. In other countries, however, the constitutional right to a trial has been interpreted to allow assessing "court costs" against the parties to the dispute. Our model predicts that free trials will result in the filing of more claims than a system with court costs. Later we explain that court costs paid by the parties to disputes in America and elsewhere fall short of the full cost to the state of a trial. Ending this subsidy would presumably result in fewer trials in America.

Similarly, the constitutional right of Americans to a jury trial is interpreted to mean that no extra fee will be charged for a jury trial. American citizens are drafted to serve on juries for nominal compensation. If the true cost of the jury were included in the court fees assessed against the parties, then fewer parties would request a jury trial and more of them would be content to let the judge decide the facts of the case.

QUESTION 11.1:   Assume that breach of business contracts strongly influences production, whereas property disputes in divorces affect distribution (but not production). Explain the consequences of these assumptions for setting filing fees at the efficient level in disputes involving business contracts and property disputes in divorces.

C. Supply of Legal Services

Here is a lawyer's joke from the cowboy days in the old West: "When I first moved to Shinbone, I was the only lawyer in town, and I almost starved. Now there are two of us, and we're both building new houses." The joke suggests that the market for legal services works in the opposite direction from the market for other goods. In economic theory, an increase in the supply of a good or service causes a fall in its price. In the joke about Shinbone, more lawyers cause higher prices for legal services by creating more legal disputes.

In fact, the number of lawyers in the United States has increased rapidly in recent years. What has happened, as a result, to the price of legal services—have they risen or fallen? Who is right, the joke about Shinbone or economic theory? Let's consider more carefully how an increase in the number of lawyers affects the filing of legal claims. The effect of an increase in the number of lawyers depends upon the organization of the market for legal services, which the bar regulates in all countries. As a benchmark, first consider the effects of an increase in the number of lawyers in a country with relatively lax regulation of the market for legal services. By "lax regulation" we mean that lawyers enjoy much freedom in creating contracts with their clients, as in the United States, and that certification and regulation of who may call themselves a lawyer is not strict. In a free market, where supply and demand determine prices, an increase in the number of lawyers shifts the supply curve out, as depicted in Figure 11.3. The shift in the supply curve from S to S' should cause the price of lawyers' services to fall from

FIGURE 11.3

The effects of more lawyers on the market for lawyers' services.
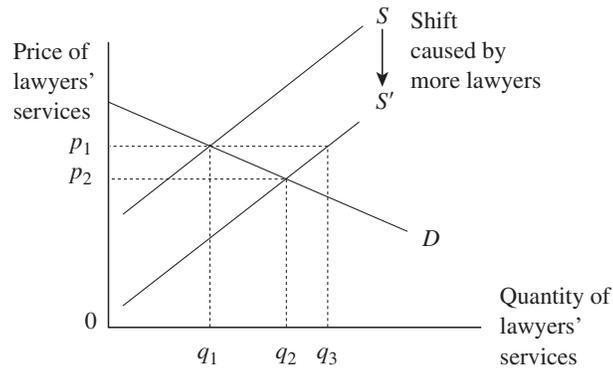
p_1 to p_2. Thus, the increase in the supply of lawyers should lower the cost of filing suits. A fall in the price of lawyers' services from p_1 to p_2 causes the demand for the services of lawyers to increase from q_1 to q_2. We conclude that an increase in the number of lawyers may cause more suits to be filed.

To illustrate, the plaintiff's lawyer in some tort cases in the United States receives compensation in the form of a "contingency fee," which means that the lawyer gets a share of the judgment if his client wins and nothing if his client loses.[1] Suppose that the plaintiff expects to win $1000 with probability .5, and the contingency fee equals .3. Then the expected value of the case to the plaintiff's lawyer equals $1000(.5)(.3) = $150. If the case takes 2 hours to prepare and try, then the lawyer's expected remuneration equals $75 per hour. Thus, a profit-maximizing lawyer will take the case so long as he or she does not have an alternative that pays more than $75 per hour. As the number of lawyers increases, the opportunities available to the average lawyer decrease. When the number of lawyers increases, some of them take cases that no lawyer would previously have taken.[2]

Some American attorneys say, "Law was a profession, and now it's a business." Increased pressure from market forces has certainly reduced intimacy and comfort among attorneys. As a group, however, lawyers are not passive victims of markets. Like other professional associations, the bar in every country attempts to control the portals of the profession in order to keep the supply of legal services low and the price high. The bar exercises this power primarily by setting high professional qualifications for the right to argue in court or supply other legal services.[3]

The bar is not immune from the law of supply and demand, but the bar in many countries has insulated itself from market pressures. For example, in many countries,

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[1] Most plaintiffs' lawyers use a sliding scale for contingency fees. A common practice is for the lawyer to take one-third of the plaintiff's award if the case is settled without trial; 40 percent if the plaintiff wins at trial; and 50 percent if a judgment for the plaintiff is affirmed on appeal. The fee scheme may vary from place to place and over time.

[2] Unlike the United States, many legal systems do not allow lawyers to take cases on a contingency-fee basis.

[3] The standard reason publicly given for regulating lawyers is to ensure their high quality—not to feather the nests of lawyers. See the Web Note referenced at the end of this section for a summary of some interesting literature on the reasons for and effects of the regulation of the legal profession in a number of different countries.

the law prescribes the minimum price that lawyers can charge for their legal services. This is approximately true in Germany, although actual practices are complex. When the law prescribes a schedule of fees for legal services, and the fee schedule is enforced effectively, an increase in the supply of lawyers cannot change the fees for legal services. Instead, an increase in lawyers causes more unemployment among them.

To demonstrate this fact, assume that the price of legal services is set at p_1 in Figure 11.3 by law. If the supply curve for lawyers is given by S, then the legal price p_1 has no effect, because it merely confirms the market price. Suppose, however, that the supply curve for lawyers shifts from S to S', while the price of legal services remains equal to p_1. The demand for lawyers at this price equals q_1, but after the shift in supply from S to S', the supply of lawyers at price p_1 equals q_3. The expression $(q_3 - q_1)$ measures the amount by which supply exceeds demand ("excess supply"), which correlates closely with the number of lawyers who want to work at the price p_1 and cannot find employment.

In fact, young German lawyers sometimes complain of unemployment or underemployment, and the law forbids them to attract clients by charging lower fees. To circumvent the prohibition, young German lawyers may try to attract business by spending more hours on the same legal task that a senior German lawyer would complete quickly, or by supplying extra services for "free." In general, the prohibition of price competition promotes quality competition and secret discounting.

Besides prescribing prices, the law can increase the earnings of lawyers by restricting entry to the bar. In some countries like Brazil, many students study law, and they can join the bar after graduating from the university. In other countries like the United States, joining the bar requires special training in a law school after completing university and success in a rigorous examination—the "bar exam."[4] In a few countries like Japan, membership in the bar is very tightly restricted by an exceedingly difficult state examination. Unlike in Brazil, even smart Japanese students who study law for years fail to pass the bar exam. We can interpret Figure 11.3 to predict the effects of these restrictions. An increase in the difficulty of the bar exam reduces the supply of members of the bar. The supply curve shifts up from S' to S, which causes legal services to fall from q_2 to q_1, while their wages rise from p_2 to p_1.

QUESTION 11.2:   Price regulation prevents some people from buying a good who value that good more than it costs to supply it. Apply this proposition to Figure 11.3, assuming that the state sets the price at p_1 and S' gives the supply.

QUESTION 11.3:   If most litigation is a costly form of redistribution, then public policy should discourage it for the sake of economic efficiency. Compare the efficiency of the following restrictions on the market for legal

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[4] In fact, until relatively recently, when Japan and South Korea partially reformed their legal education systems, the United States was the only country in the world in which legal education was graduate education.

services: (a) low damages awarded as compensation for injuries; (b) high fees charged by the court for the filing of a legal complaint; (c) lawyers' fees set by the state at a high level.

QUESTION 11.4: Litigation insurance shifts the legal costs of plaintiffs or defendants to insurers. How do you think this insurance would affect the number of suits filed?

Web Note 11.1

Please see our website for a summary of some recent literature on the legal profession. We discuss and compare how different countries educate, organize, and regulate lawyers.
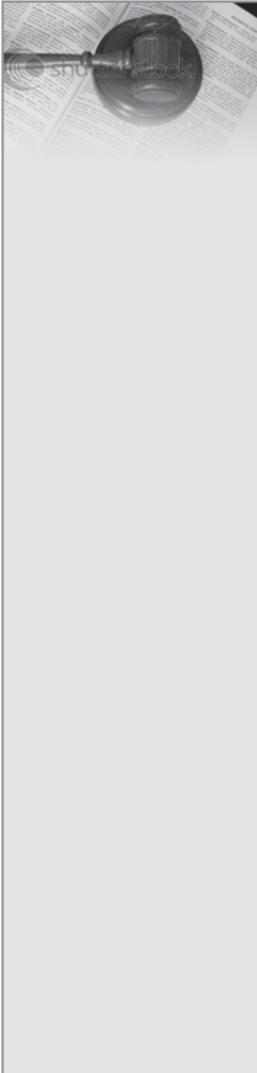
Class Actions

Did you ever write a check for more money than was in your account? Such a check usually "bounces," and your bank charges you a fee called an "NSF charge" (not-sufficient-funds charge). In California in 1975, Mr. Perdue was charged $6 by Crocker Bank for writing an NSF check. He sued the bank in a case that eventually went to the California Supreme Court. It costs a lot more than $6 to pursue a case that far. Mr. Perdue and his lawyers pursued this case because the stakes far exceeded $6. In fact, Mr. Perdue brought this action not merely on his own behalf but also on behalf of all those account holders at Crocker Bank who paid NSF charges. If successful, Mr. Perdue would recover his $6 and all the other alleged overcharges made by Crocker Bank against its customers.

When a plaintiff attempts to bring an action on behalf of a class of plaintiffs, the court must decide whether to "certify" a "class" and permit someone like Mr. Perdue to sue on behalf of himself and everyone else in the alleged class. This is a delicate problem because a successful suit by Mr. Perdue will extinguish everyone else's claims. Once a class action succeeds, the members of the class, most of whom were not even consulted about the case, will have lost their right to sue.

When should a class be certified? Economics suggests that class actions are appropriate when the stakes are large in aggregate and small for any individual plaintiff. In our example, the sum of NSF charges to all account holders at Crocker Bank roughly measured the stakes in dispute, and the stakes for each individual account holder roughly equaled $6. So, the certification of a class seems appropriate.

Once a class is certified, if the plaintiff who represents the class agrees to a settlement, or if that plaintiff succeeds at trial, damages will be paid by the defendant. These damages must be distributed in such a way that the whole class of plaintiffs benefits, rather than merely the active plaintiff and his or her lawyers, who are naturally inclined to grab a large share for themselves. The courts must decide whether a proposed distribution in a class action is fair. For example, should the active plaintiff's lawyers, who are often responsible for organizing and initiating the suit, be compensated at their standard billing rate? Or should they

(*Continued*)

receive more than their usual fee in order to compensate them for taking the high risk of losing the suit? Distributing small sums of money to everyone in the class is usually prohibitively expensive. Sometimes the court approves a distribution to some members of the class and the donation of the remaining recovery to a charity that benefits people similar to the members of the class.

In technical terms, class actions ideally consolidate litigation to achieve economies of scale and provide a legal remedy for small injuries that are large in aggregate. (Additionally, class actions are sometimes used to reduce total litigation costs in mass torts, as with asbestos victims or, as we saw in a Web Note in Chapter 9, those harmed by tobacco consumption.)

The potential economic benefits of class actions are clear. But recently, some have raised the possibility that there are economic costs as well. The thrust of the concern is that there are some circumstances in which the court certifies a class of plaintiffs to proceed against a defendant even though the merits of each individual claim are very small (so that the objective likelihood of each individual's prevailing is small). But the risk to the defendant if the class should prevail is so catastrophic that the defendant is, in essence, blackmailed into settling a class action, even though it might have won each individual contest with members of the class.

These are precisely the arguments made by Judge Richard A. Posner in *In the Matter of Rhone-Poulenc Rorer, Inc.*, 51 F.3d 1293 (7th Cir. 1995). The litigation in that case involved a group of about 300 hemophiliacs who alleged that they had become HIV-positive as a result of taking AHF, a clotting agent made by Rhone-Poulenc Rorer, Inc. in the early 1980s. The 300 plaintiffs all had similar enough claims that they sought and received certification as a class from the federal district court. Judge Posner, on appeal, was reluctant to certify the class. Of the 13 individual cases that had been brought at the time of this appeal, 12 had been won by the defendant, and Judge Posner speculated that the defendant would have probably won the vast majority of the remaining individual cases. Nonetheless, he suggested that if the class were to be certified, many more plaintiffs would present themselves, perhaps in the thousands. And in that circumstance Rhone-Poulenc Rorer might be facing $25 billion in potential liability and, as a result, bankruptcy. "They may not wish to roll these dice. That is putting it mildly. They will be under intense pressure to settle." Judge Posner quoted Judge Henry Friendly as saying, "settlements induced by a small probability of an immense judgment in a class action [are] 'blackmail settlements.'" That is, there are circumstances in which the mere act of certifying a class may be enough to convert low-merit claims into such a high risk of catastrophic failure that the defendant will be impelled to settle.

These concerns about class actions creating settlement pressure may be overblown. See Charles M. Silver, *"We're Scared to Death": Class Certification and Blackmail*, 78 N.Y.U. L. Rev. 1357 (2003). But Congress found the concerns compelling enough to pass the Class Action Fairness Act of 2005, which expanded federal jurisdiction in class certifications and imposed restrictions on attorneys' fees in class actions.

Most other countries, including those of the European Union, have not allowed class action litigation. That may be changing; the EU appears to be poised to allow class action litigation.

QUESTION 11.5: Explain the effects of class actions on the number of suits, using our distinction of causes, into (1) injuries, (2) filing costs, and (3) expected value of the legal claim.

D. Agency Problem

Recall that we built the theory of contracts in Chapter 8 upon the "agency game." In that game, the principal decides whether to put a valuable asset under the control of the agent, and the agent decides whether to cooperate or appropriate. In a legal dispute, the plaintiff puts a legal claim under a lawyer's control. The lawyer can serve or exploit the client. The lawyer serves the client by providing good advice and devoting effort to winning the case. Consequently, the market for legal services is an agency game.

We will analyze the lawyer's incentives in this game to provide information and effort to his clients. First, consider the lawyer's incentives to work on a case. As explained in Chapter 8, the agency relationship is efficient from the viewpoint of the principal and agent when the parties maximize their joint payoffs. To maximize the joint payoffs, the lawyer should work on the case until the marginal cost equals the marginal benefit for both parties. The marginal cost of the lawyer's time spent on a suit equals its value in the best alternative use ("opportunity cost"). If the lawyer represents the plaintiff, the marginal benefit to the client equals the resulting increase in the expected value of the client's legal claim. If the lawyer represents the defendant, the marginal benefit to the client equals the resulting decrease in the expected value of the client's legal liability.

Devising a contract to achieve this ideal is notoriously difficult. Contracts with lawyers usually focus upon three variables: (1) time spent working, (2) services performed, and (3) outcome of the dispute.[5] In many cases, the lawyers bill by the hour (or rather the minute[6]). Hourly billing causes lawyers to externalize the cost of working on a case, which gives them an incentive to devote too much time to it. Lawyers also bill by the service performed (x dollars for filing a complaint, y dollars for arguing the case in court, z dollars for an appeal, and so forth). Fee-for-service contracts cause lawyers to internalize the cost of additional time spent on the service and to externalize the benefit, which gives lawyers an incentive to devote little time to performing many services. With contingency fees, the plaintiff's lawyer receives a share of the outcome, such as one-third of the settlement or judgment. When working for a contingency fee of one-third, the lawyer internalizes the cost of additional time spent on the service and internalizes one-third of the resulting benefit. Thus, each of the three methods of remuneration distorts the lawyer's incentives away from the client's best interests, but each method distorts in a different direction.

Second, consider the lawyer's incentive to provide information. Imagine that a plaintiff consults a lawyer to find out whether the cost of filing a complaint exceeds the expected value of the resulting legal claim, as depicted in Figure 11.2. A truthful answer may not maximize the lawyer's expected payoff. A lawyer who is paid by the hour, or a lawyer who is paid for services performed, may exaggerate the expected value of the legal claim in order to induce the client to pay for filing a complaint.

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[5] Other alternatives that we do not discuss are to hire a full-time lawyer ("in-house counsel") or to purchase liability insurance.

[6] Joke: A businessman receives a bill from his lawyer that reads: "Crossed street to see client. Thought it was you. $50."

  Joke: A sociologist studying longevity found that the average lawyer lives twice as long as the average doctor and three times as long as the average school teacher. Life span for lawyers was computed using billing hours.

Alternatively, a lawyer who is paid a contingency fee has an incentive to mislead in the opposite direction. Imagine that a plaintiff consults a lawyer to find out whether he will take the case on a one-third contingency. Under this contract, the lawyer internalizes all the cost of filing the complaint, and the lawyer internalizes one-third of the expected value of the claim. Therefore, the lawyer may refuse to take the case, even though the expected value of the claim exceeds the filing costs.

Notice that this incentive problem would be solved if the lawyer took the case on a "100 percent contingency." With a 100 percent contingency, the lawyer internalizes the cost of working on the case and the lawyer also internalizes 100 percent of the payoff from a settlement or judgment. A "100 percent contingency" means that the lawyer keeps the full value of a settlement or judgment; in effect, the client sells the claim to the lawyer. A competitive market for the sale of legal claims would solve many incentive problems for lawyers, but the law prohibits such transactions everywhere.[7]

In markets with lax regulation like the United States, lawyers and their clients have scope to design their own contracts. Thus, the plaintiff's lawyer might charge by the hour for some activities, charge fixed fees for other services, and also take a contingency. In more tightly regulated legal markets like Germany, the state may prescribe the fees for services performed, limit additional fees for time spent on the case, and prohibit contingency fees. In addition, some countries like Britain have a "split bar," which means that the client deals with one lawyer (the "solicitor"), and the client's lawyer chooses another lawyer (the "barrister") to argue the case in court.[8] The wide variation in solutions to the agency problem by different countries reflects its difficulty, as well as reflecting the political power of an ancient profession.

In general, the agency problem between lawyer and client has two causes: asymmetric information and randomness. The lawyer knows much more about the law than the client. Furthermore, the case's outcome depends on random events such as the assignment of a judge and the availability of a witness. Randomness prevents the client from inferring the lawyer's performance from the cases' outcomes.

To overcome these problems, people often choose lawyers based upon reputation and long-run relationships. (Recall the demonstration in Chapter 8 that long-run relationships solve agency problems.) Reputation explains why established law firms command a premium for their services. The growing importance of reputation may also explain the steady increase in the size of law firms in many countries. Large firms are the "brand names" that stand for quality in legal services. However, many countries create obstacles to retard the growth of "brand names" in law. For example, some countries prohibit law firms from naming themselves after anyone not currently working in the firm; so, the firm's name has to change with the retirement of senior partners. Furthermore, most countries restrict or prohibit advertising by lawyers; so, lawyers cannot build a reputation by broadcasting their accomplishments.[9]

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[7] The common law prohibition is called "champerty." We discussed a market for unmatured tort claims in a box in Chapter 7.

[8] England is in the process of abolishing this distinction.

[9] One of the authors was in the People's Republic of China in the late 1980s when the government authorized the first private law firms in Shanghai in 40 years. Those firms were named "Shanghai People's Law Firm Number 1," "Shanghai People's Law Firm Number 2," and so on. Today law firms in the PRC frequently bear the names of the founders.

QUESTION 11.6: From an economic viewpoint, restrictions on advertising by lawyers look like a device used by the bar to limit competition. (Such advertising restrictions broke down in America, not because they violated antitrust laws, but because the courts found them to violate the constitutional right of free speech.) From an economic viewpoint, is advertising by lawyers any different from advertising by other professionals, such as accountants or insurers?

QUESTION 11.7: Contingency fees:

a. If the plaintiff is more averse to risk than his or her lawyer, would this fact incline the client to prefer a contingency fee or an hourly fee?
b. Under a contingency fee, the plaintiff bears none of the lawyer's costs of a trial. Consequently, the plaintiff can take a hard position in bargaining over a settlement. Explain why the plaintiff's lawyer might also benefit from this commitment to hard bargaining.
c. Contingency fees are common for the plaintiff's lawyer in America, but not for the defendant's lawyer. Under a contingency fee contract, the defendant would pay a fixed amount to a lawyer at the beginning of the legal process and the lawyer would receive a fraction of the trial judgment. Are the incentive effects of contingency fees the same for the plaintiff's lawyer and the defendant's lawyer?

Web Note 11.2

For more on the economics of contingency fees, the statistical pattern of legal incomes in the United States, and additional information about recent trends in "Big Law" (large law firms with national and international clients and time-honored reputations), see our website.

E. Nuisance Suits

The preceding chapter demonstrated that 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. Litigation costs are a form of transaction costs. Now we show how divergent litigation costs distort settlements.

Assume that litigation will cost one party far more than the other. For example, assume that a trial will disrupt the defendant more than the plaintiff. The cost of disruption increases the burden imposed on the defendant by a trial. Consequently, the defendant's bargaining position is relatively weak. Given these facts, a reasonable settlement favors the plaintiff.

To illustrate using an extreme example, developers in New York City sometimes avoid construction delays by settling suits that have no merit. In such a "nuisance suit," the plaintiff files a complaint solely to delay the construction project and extract a settlement. The plaintiff stands to gain nothing from trial. Instead of winning at trial,

the plaintiff expects the defendant to "buy him off" in a settlement. The defendant "buys off" the plaintiff in order to avoid the high cost of delaying construction.

What conditions make a nuisance suit possible? Our bargaining theory can easily answer this question. First, we describe an example in which a nuisance suit fails, and then we change the numbers to show a nuisance suit that succeeds.

Suppose that litigating would cost the plaintiff and the defendant $1000 each, and a trial would result in victory for the defendant ($EJ = \$0$). The plaintiff's threat value is $-\$1000$. It is easy to see that a reasonable settlement (the "Nash bargaining solution") requires the defendant to pay the plaintiff $\$0$.[10] If the plaintiff files suit and demands a settlement, the defendant should call the plaintiff's bluff and refuse to settle.

Now change the numbers. Suppose a trial would cost the plaintiff $1000 and the defendant $5000, and the plaintiff expects to win $0 at trial. The large cost of the trial to the defendant could be due to the fact that she is a developer in New York City. The $5000 cost of the trial includes the indirect costs to her of delaying construction until the trial ends. Under these new numbers, a reasonable defendant should pay off the plaintiff and settle the nuisance suit. (Can you demonstrate that a reasonable settlement— the Nash bargaining solution—equals $2000?[11])

This account of nuisance suits leaves out the potentially important fact that one party may incur costs before the other. To illustrate by modifying the preceding example, assume that most of the plaintiff's costs of $1000 involves gathering facts before the trial, whereas most of defendant's costs of $5000 involves time spent in the trial. In effect, the plaintiff must spend $1000 first, after which the plaintiff will have the power to impose $5000 in costs on the defendant at no further cost to himself. Before spending any money on the case, the plaintiff asks the defendant to settle for $2000. Should the defendant accept or refuse? The answer depends on whether the defendant thinks that the plaintiff is prepared to spend $1000 on the case. Perhaps, if he thinks that the plaintiff will not spend $1000 first, then the defendant will reject the threat as not credible. Or perhaps, if he thinks that the plaintiff will spend $1000 first, then the defendant should settle before it gets more expensive.

> **QUESTION 11.8:** Make a small change in the numbers in Figure 11.2. Assume that litigation costs the plaintiff $20, and the plaintiff wins $40 (not $100) at trial with probability .5. Define a nuisance suit as one in which the expected value of trial is nonpositive ($EVT \leq 0$). Demonstrate that this is a nuisance suit.

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[10] The cooperative surplus (here, the total amount that the parties would save from not going to trial) is $2000. In a settlement, the plaintiff should receive his threat value plus half the cooperative surplus, or $-\$1000 + 0.5(\$2000) = \$0$.

[11] The plaintiff's threat value equals $-\$1000$. The cooperative surplus of not going to trial now equals $6000 (the plaintiff's savings of $1000 plus the defendant's savings of $5000). The defendant's payoff to the plaintiff should equal the plaintiff's threat value plus half the cooperative surplus, or $-\$1000 + 0.5(\$6000) = \$2000$.

QUESTION 11.9: The preceding question assumed that the plaintiff expects to win $40 at trial with probability .5, and that the trial costs the plaintiff $20. Assume that litigation costs the defendant $60 (not $20). Demonstrate that a reasonable settlement is for the defendant to pay the plaintiff $40.

QUESTION 11.10: Use the numbers in the preceding question, but assume that the total litigation costs of $80 ($60 for defendant, $20 for plaintiff) are paid by the *losing* party (European rule of loser pays all). Demonstrate that a reasonable settlement is for the defendant to pay the plaintiff $20.

QUESTION 11.11: Use the analysis of this section to explain why "blackmail settlements" might occur in some class action lawsuits (See the box above on "Class Actions").

F. Offers as Filters

Relative optimism can cause wasteful trials. Sometimes, however, wasteful trials occur between parties who are *not* optimistic. Such trials occur because of the strategic nature of bargaining. In the 1990s the Dalkon Shield Claimants Trust paid out billions of dollars to hundreds of thousands of women who used this intrauterine contraceptive device (IUD) and allegedly suffered medical harm. The Trust's problem was to distribute money to accident victims without trying each case to determine the extent of the claimant's injury. We model this problem to show how the defendant can use settlement offers to filter plaintiffs and determine the true extent of their injuries.

Assume that the defendant's defective product has injured people who sue for compensatory damages. If a dispute goes to trial, the plaintiff will receive damages equal to the true cost of the injury. The defendant, however, cannot determine the true extent of the plaintiffs' injuries *before* trial. Consequently, the defendant cannot make a settlement offer to each plaintiff that equals the individual's injury. Instead, the defendant contemplates making the same offer to every plaintiff. The plaintiffs with minor injuries will accept the offer, and those with major injuries will reject it.

To be concrete, assume the defendant offers $10,000 to each plaintiff to settle out of court. If a plaintiff refuses the offer and goes to trial, litigating will cost the plaintiff $1000 and the court will award damages equal to the true cost of the injury. Consequently, each plaintiff accepts the offer to settle for $10,000 if the true cost of the injury does not exceed $11,000. Thus, the defendant offers to pay more than plaintiffs who have minor injuries would demand to settle. In contrast, each plaintiff rejects the offer if the true cost of the injury exceeds $11,000. Thus, the defendant offers to pay less than plaintiffs who have major injuries demand to settle.

In this example, the offer to settle for $10,000 *filters* plaintiffs according to whether the severity of their injuries exceeds $11,000. Raising the offer to $10,100 would filter plaintiffs according to whether the severity of their injuries exceeds $11,100. Conversely, lowering the offer to $9900 would filter plaintiffs according to whether the severity of their injuries exceeds $10,900.

How much should the defendant offer in order to minimize the total cost of her legal liability? The more she offers, the more she pays in settlements and the less she pays in judgments and litigation costs. The less she offers, the less she pays in settlements and the more she pays in judgments and litigation costs. She minimizes her liability by balancing these considerations.

To illustrate, assume that 50 plaintiffs settle when the defendant offers $10,000, and 55 plaintiffs settle when she offers $10,100. Raising the offer by $100 requires her to pay the original 50 plaintiffs an extra $100, for a total increase in costs of $5,000. By raising the offer, she settles with five more plaintiffs and litigates with five fewer plaintiffs, which saves the defendant $1000 each in litigation costs, or a total of $5,000. Also, by settling with five additional plaintiffs, she pays $10,100 to each of them and avoids paying a judgment to them. If the judgment were paid, it would be more than $11,000 per person and less than $11,100, for an average of approximately $11,050.[12] In summary, increasing the offer by $100 causes the defendant's costs to change as follows:

$$\underset{\substack{\text{inframarginal}\\\text{settlements}}}{\$100(50)} - \underset{\substack{\text{administrative}\\\text{costs}}}{\$1000(5)} + \underset{\substack{\text{marginal}\\\text{settlements}}}{\$10,100(5)} - \underset{\substack{\text{marginal}\\\text{judgments}}}{\$11,050(5)} = -\$4750.$$

Increasing her offer by $100 saves the defendent $4,750; so, the defendant should increase her offer. Furthermore, the defendant should continue increasing the offer until her costs stop falling.

Sometimes the defendant can save costs by randomizing offers. For example, assume the defendant offers $10,000 to 80 percent of the plaintiffs who file a complaint and offers $0 to 20 percent of them. Randomizing can save costs by discouraging nuisance suits. To see why, consider that the 20 percent of plaintiffs who receive no offer to settle go to trial or drop the case. At this point, any nuisance suits among the 20 percent will be dropped, because the plaintiffs' expected value of trial is negative in a nuisance suit. In effect, a nuisance suit is a bluff, and we are assuming that the defendant calls the bluff in 20 percent of the cases. When players sometimes bluff in a game, their opponents usually benefit from calling the bluff a proportion of the time, but not 100 percent and not 0 percent of the time.[13]

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[12] These five plaintiffs reject an offer of $10,000 and accept an offer of $10,100 to settle out of court. The judgment at trial must be more than $11,000 or else these defendants would have accepted the offer of $10,000. The judgment must be less than $11,100, or else these defendants would reject the offer of $10,100.

[13] Developing the example further shows the value of calling bluffs at random. Assume as before that the defendant offers a percentage (p) of plaintiffs $10,000 to settle, and the defendant refuses to settle with $(1 - p)$ of the plaintiffs. Also assume that potential plaintiffs must spend $3000 to develop and file a complaint. By definition, a nuisance suit is brought only to extract a settlement; so, assume that the expected value of litigation for the plaintiff in a nuisance suit equals $0. Thus, a person who brings a nuisance suit spends $3000 in order to file a complaint with expected value $10,000p + \$0(1 - p)$. A rational plaintiff who maximizes expected value (as will a risk-neutral decision maker) will file a nuisance suit when the following condition is satisfied:

$$\$10,000p + \$0(1 - p) > \$3000 \; p > .3.$$
$$p > .3.$$

Thus, the defendant in our mathematical example eliminates all nuisance suits by randomizing and offering to settle with no more than 30 percent of plaintiffs.

With more information, the defendant could develop a better strategy to deal with nuisance suits. If the defendant had enough information to identify plaintiffs who are more likely than the others to bring nuisance suits, then the defendant could offer to settle with them at low probability and offer to settle with all of the other plaintiffs with high probability.

G. Unitary vs. Segmented Trials

A trial usually involves several issues, most prominent of which are whether the defendant is liable, and, if liable, the extent of the damages. The issues can be bundled together in a single trial or distinguished from each other and tried separately. For example, liability and damages are decided in the same trial in most tort suits in the United States, but sometimes separate trials are held on liability and damages. Furthermore, European trials often proceed in small segments in which separate issues get decided in a series of exchanges between the judge and the parties to the dispute. These facts raise at least two interesting questions: Are the transaction costs of resolving disputes lower under unitary or segmented trials? Does segmenting trials favor plaintiffs or defendants?

Economists have begun to address these questions, for example, through the use of the notion of "economies of scope." "Economies of scope" refers to reductions in cost from combining two different activities. Sometimes the questions of liability and damages are bound together. As explained in Chapter 6, showing negligence under the Hand rule typically requires demonstrating fault and also measuring the extent of damages. When the issues are bound together, deciding them simultaneously is cheaper than deciding them sequentially. Thus, economies of scope favor unitary trials. In contrast, sometimes the question of liability is easily separated from the question of damages. In patent law, the question of whether a new innovation infringes a prior patent is often completely distinct from the harm the new innovation caused to the owner of the prior patent.

In any event, a finding of "no liability" in the first trial precludes having a second trial on damages. Sequential ordering can save costs by precluding subsequent trials— a "preclusive disposition." Thus, minimizing the transaction costs of resolving disputes requires balancing economies of scope and the savings from preclusive dispositions. Large economies of scope favor unitary trials. Frequent preclusive dispositions favor segmented trials.[14]

In the United States, judges have discretion over whether trials should be unitary or segmented. In choosing between these processes, judges probably weigh economies of scope and the probability of a preclusive disposition, along with other factors. Defendants often ask the judge for segmented trials, whereas plaintiffs often seek a unitary trial. This pattern occurs when the facts about liability and damages often reinforce each other. For example, a graphic account of damages can create sympathy in the jury for the plaintiff and predispose it to find liability. Alternatively,

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[14] See William M. Landes, *Sequential Versus Unitary Trials: An Economic Analysis,* 22 J. LEGAL STUD. 99 (1993).

a graphic account of negligence can create hostility in the jury for the defendant and predispose it to find large damages. The jury may behave this way even though, strictly speaking, the formal law prescribes independent grounds for finding liability and setting damages.

In addition to these facts about the psychology of juries, there is a rational reason why defendants might favor segmented trials. Segmenting trials has an advantage over unitary trials in sorting out plaintiffs and forcing them to reveal the strength of their cases, as we illustrate by a hypothetical example. Assume that consumers who suffer an injury allege that a certain company is liable. Plaintiffs can be divided into two types according to how they would fare at trial. The first type ("uninjured plaintiffs") would lose on liability, and the second type ("injured plaintiffs") would win on liability and receive substantial damages. Plaintiffs know their type when they commence legal proceedings, but the defendant does not. In technical terms, individual plaintiffs have private information about their type that becomes public after trial. Consequently, the defendant cannot distinguish between the two types of plaintiffs when making settlement offers.

In these circumstances, a segmented trial has a big advantage over a unitary trial for the defendant. First, assume a unitary trial and consider the efforts of the defendant to settle out of court. Before the trial begins, the defendant can make a settlement offer. A settlement offer is pointless unless the injured plaintiffs accept it. If the defendant makes a single settlement offer to everyone and that induces the injured plaintiffs to accept, then the uninjured plaintiffs will also accept. Thus, the only successful settlement offer available to the defendant is one that every plaintiff accepts. Under unitary trials, the defendant will probably settle with everyone.

Second, consider a segmented trial. If the defendant refuses to make a settlement offer before the first trial, all of the uninjured plaintiffs will drop their claims, rather than lose at trial. In contrast, the injured plaintiffs will proceed to trial. Thus, the first trial sorts injured plaintiffs and uninjured plaintiffs. After liability has been decided in the first trial, the defendant can make a settlement offer to the injured plaintiffs alone. Thus, segmenting the trial enables the defendant to sort plaintiffs by their injuries for purposes of making an offer to settle.[15] *In general, segmenting trials enables defendants to overcome asymmetric information and separate types of plaintiffs according to the strength of their claims.*

> **QUESTION 11.12:** In the preceding example, we contrasted unitary and segmented trials from the viewpoint of the defendant's costs. Analyze the example from the viewpoint of social costs, defined as the sum of administrative costs and error costs.

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[15] In technical terms, the "bifurcated equilibrium is separating" (injured and uninjured plaintiffs receive different payoffs), whereas the "unitary equilibrium is pooled" (injured and uninjured plaintiffs receive the same payoff). Notice that in this example, the defendant saves money from segmented trials rather than unitary trials if the cost of litigating liability with injured plaintiffs is less than the cost of settling with uninjured plaintiffs.

Web Note 11.3

The behavioral law and economics literature has investigated a phenomenon known as "hindsight bias" that may have a profound effect on the ability of trials to reach a desirable social result. For a summary of that literature and a suggestion of how it might impact the discussion above about unitary versus segmented trials, see our website.

H. Multiple Injurers: Joint and Several Liability

In Chapter 7 we explained the U.S. law for accidents involving multiple injurers. The usual rule is "joint and several liability with contribution." Under this rule, if A and B jointly caused harm of 100 to C, then C can sue A for 100 and not sue B, or C can sue B for 100 and not sue A, or C can sue A for 60 and then sue B for 40. Joint and several liability with contribution allows C to sue A and B separately or jointly for any amounts whose sum does not exceed 100, and then, depending on what C did, for A and B to sue one another to recover a portion of the 100 paid to C. In brief, the victim can recover the full cost of his injury (and no more) from whichever of the joint injurers is easier to sue. Typically the victim goes after the richest injurer who can pay the damages in full.

While "joint and several liability" is the usual U.S. rule, "joint liability" is an alternative. Under joint liability, the plaintiff must sue all of the injurers jointly, rather than suing them separately. Thus, C would have to sue A and B for 100.

Which liability law results in more trials? Legal theorists have often presumed that the rule of joint and several liability with contribution results in fewer trials and more settlements than does joint liability, because the plaintiff can stampede the defendants into settling, like a herd of cows in danger of running from a fire. To see why, assume that A and B jointly caused harm of 100 to C. Under joint and several liability with contribution, C can threaten to sue B for 70 unless B settles out of court for 50, and C can also make the identical threat to A. The fear of disproportionate liability allegedly causes defendants to stampede to settle the case. In contrast, settling under joint liability requires both of the defendants to agree to its terms, which might be difficult and cause a trial.

This reasoning, however, is flawed, because it fails to consider the uncertainty of trials.[16] Assume that the probability is .5 of C's winning 100 in a suit against A or B. C adopts this strategy: Sue A for 100; if the suit succeeds, then do not sue B; if the suit fails, then sue B for 100. C's expected payoff from this strategy is

$$(.5 \times 100) + .5(.5 \times 100) = 75$$

In effect, several liability with contribution gives the plaintiff an insurance policy against the risk of trial. Insurance consists in the fact that he can try to win several suits,

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[16] Lewis A. Kornhauser & Richard E. Revesz, *Sharing Damages Among Multiple Tortfeasors,* 98 Yale L. J. 831 (1989).

rather than trying to win only one suit. Being insured against loss at trial, the plaintiff is not so eager to settle. Joint and several liability causes C's expected value of litigating to increase from 50 to 75. As a consequence, C will demand more to settle out of court, which may make settlement more difficult and trial more likely.[17]

We have explained reasons for the old belief that several liability with contribution results in more settlements and fewer trials than does joint liability. We also explained the newer belief that several liability with contribution results in more trials and fewer settlements than does joint liability. While the theory is clear, which effect is stronger remains an unanswered empirical question.

> **QUESTION 11.13:**   In the preceding discussion, we contrasted joint and several liability (with contribution) from the viewpoint of the number of trials. Compare the two rules from the viewpoint of social costs, defined as the sum of administrative costs and error costs.

I.   Burden of Proof and Standard of Proof

Economic theory has developed a precise calculus for making decisions under uncertainty, such as investing in the stock market, insuring an automobile, or gambling in Las Vegas. As explained in Chapter 2, this calculus is called "maximizing subjective expected utility (SEU)." Actors who contradict its rules frustrate themselves and give strategic advantages to their competitors. A trial is an uncertain event that requires a decision by the court. Do court procedures conform to the logic of economic decision making under uncertainty? If the answer is "yes," then courts are economically rational. If the answer is "no," then courts are irrational by the standards applicable to economic behavior.

The law imposes constraints on behavior that some individuals would not impose on themselves. Many injurers would not voluntarily compensate the victims of accidents or breaches of contract, even when ordinary morality and economic efficiency require compensation. Similarly, the rules of evidence impose constrains on the use of information by judges and juries that many individual decision makers would not voluntarily impose on themselves. For example, American courts do not allow witnesses to testify about rumors reported to them by other people (the rule against hearsay), whereas rational investors often let rumors affect their decisions to purchase stock. In general, American courts prevent rumors, hearsay, and other second-hand information from affecting judgments of liability or guilt much more than a rational person would prevent them from affecting her personal judgments.

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[17] To complete the proof, consider A's expected losses. A expects to lose at trial with probability .5 and to pay 100. If A loses at trial, then A will sue B for equal contribution and win with probability .5. Thus A expects litigation to cost

$$-.5 \times (100 - .5 \times 50) = 37.5.$$

Thus, A will not settle for more than 37.5, and B is in the identical situation as A. However, C will not settle for less than 75. Settlement is impossible unless A and B cooperate together and offer to settle with C for 75. So, a trial is likely.

Procedural rules impose constraints on decision making under uncertainty. Within these constraints, judges and juries presumably strive to reason like rational decision makers. What else could they strive for? The law constrains the rules of inference, but it does not ask people to abandon their practical reason. Within the constraints of procedural rules whose justification is not necessarily economic, the economic logic of choice under uncertainty presumably applies to courts. Consequently, broad areas of agreement exist between legal procedures and economic rationality.

Within certain constraints of fairness, the rules of statistical reasoning provide an appealing standard of rationality to which courts should aspire. Consequently, these rules can provide a reconstruction of the aspirations for rationality by courts, even though the language of the courts seldom invokes the statistical rules. In this respect, the economic analysis of decision making is similar for courts and businesses. A good model of business behavior assumes the maximization of profits, even though businessmen untrained in economic theory do not use its language to reason about their choices. Similarly, a good model of court behavior assumes consistency with statistical rules, even though courts seldom use the language of probabilities and statistics.

An economically rational decision maker begins with some prior beliefs and updates them in light of new evidence by conforming to certain rules of inference. Evidence is ideally processed in much the same way in trials. A rational gambler begins with prior beliefs based upon experience, hunches, and instincts, and whatever information can be gleaned about the event in question. The judge instructs the jurors at the beginning of a trial to rid themselves of all prior beliefs concerning the case. They should begin as if they knew nothing factual pertaining to this dispute. A potential juror with knowledge of facts about the case may be excluded from the jury—he should be a witness, not a juror. In effect, a juror is asked by the judge to construct a probability estimate (called a "prior probability estimate" or a "prior" by statisticians) of the defendant's liability or guilt. This constructed estimate of probability assumes no knowledge of particular facts pertaining to the case.

Starting without prior evidence, the jury should revise their beliefs exclusively in light of the evidence admitted during the trial. Further, the judge explains that one of the parties has the burden of producing evidence to prove its position in the dispute. In common law countries, the plaintiff must prove the case by a preponderance of the evidence in civil disputes, and the plaintiff must prove the case beyond a reasonable doubt in criminal cases. (The standards are formulated differently in civil law countries.[18]) The constructed probability estimate favors the defendant, because the plaintiff has the burden of proof.

The jury updates the constructed probability estimate in light of the evidence allowed to enter the trial, called a "posterior distribution."[19] At the trial's end, the legal

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[18] Lawyers in civil law systems sometimes say that there is one standard of proof in criminal and civil law cases: Sufficient evidence to produce a clear conviction in the judge's mind. However, a "clear conviction" is a psychological state, which does not describe the standard of proof that produces such a conviction. When training judges, should you teach them that a conviction is "clear" when supported by the preponderance of the evidence or when it is beyond a reasonable doubt?

[19] Joke: A statistician is the only person who can safely comment on someone else's posterior distribution.

decision maker, whether juror or judge, will have a posterior probability estimate of the defendant's liability probability formed after hearing the evidence presented and admitted at the trial. If the posterior probability exceeds 50 percent, the plaintiff has proved the case by the preponderance of the evidence and deserves to win; otherwise, the plaintiff deserves to lose. Reasoning in the courtroom may thus be described as constrained rational choice under uncertainty, where the constraints are formed by rules of evidence.[20]

As noted, this is an idealized reconstruction of actual reasoning in court, which provides a standard for evaluating the court's decision making. In this light, the actual behavior of courts often seems puzzling or irrational, as we show by the *gate crasher's paradox.*

> A rock concert is sold out. The auditorium holds 1000 people. Ticket holders file through the front doors and occupy 400 seats. Then, before any more legitimate ticket holders can get in, some rude youths break down a back door and crash in, occupying all 600 of the remaining seats. There are so many gate crashers that the concert's organizer cannot eject them; so, he proceeds with the music.
>
> The concert organizer photographs the crowd and succeeds in identifying 100 persons who were in the audience. Of the 100, he does not know which ones bought tickets and which ones crashed the gate; so, he names all of them in a lawsuit. By the time the suit is brought, ticket stubs have been discarded; so, few defendants can prove that they purchased tickets. At trial the plaintiff's lawyer points out that civil suits are decided according to the preponderance of the evidence. Further, he shows that 600 out of 1000 people in the audience were gate crashers and that, therefore, the chances are at least .6 that any defendant is a gate crasher. According to the plaintiff's lawyer, the preponderance of the evidence favors liability for each defendant; so, his client deserves to win.

This use of probabilistic reasoning is sound for betting on whether any particular defendant crashed the gate, but it is unacceptable in court. Let us change the facts to make the evidence more acceptable:

> One of the guards at the back door purportedly recognized 100 of the gate crashers. The concert organizer sues them and the guard testifies in court that he saw them crash the gate. Tests performed on the guard show that he remembers and correctly identifies defendants' faces 60 percent of the time. The plaintiff's lawyer points out that civil suits are decided according to the preponderance of the evidence and that the guard's eyewitness identifications are more likely to be correct than incorrect. Therefore, the lawyer argues, the plaintiff deserves to win.

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[20] The decision-making process described here is an example of "Bayesian inference." For more along these lines, see Dale Nance, *Evidential Competition and the Burden of Proof,* 49 Hastings L. J. 621 (1998).

The first example of evidence was based upon mere probabilities (what is called in the literature "naked statistical evidence"), which courts view unfavorably. The second example of evidence was based upon eyewitness reporting, which courts view favorably (but with caution). This example was constructed so that the probabilistic evidence equals the reliability of the eyewitness testimony. Even so, the former evidence would probably be excluded in an American court, and the latter evidence would be allowed, so that the plaintiff would be likely to lose the case under the first set of facts and win under the second set of facts. However, a rational gambler would give equal weight to probabilistic evidence and eyewitness testimony having the same reliability. When betting whether the defendant crashed the gate, the rational gambler regards a 60 percent likelihood as just as good as eyewitness testimony that is 60 percent reliable. Insofar as naked statistical evidence results in no more errors than eyewitness testimony, excluding the latter from court and including the former seems puzzling and inconsistent but that is what courts often do in the U.S.

Instructions in court for combining evidence often obscure or contradict the rules of probability theory, as illustrated by a recent trial from Oakland, California. A man went to the hospital for a hernia operation. Before the operation, the anesthesiologist gave the patient a medical exam. Having completed the exam, the anesthesiologist put the patient to "sleep." In an ordinary case, the anesthesiologist would keep the patient "sleeping" until the surgeon repaired the hernia, the patient would wake up, and the patient would leave the hospital and go home the same evening. In this case, however, the patient stopped breathing, suffered cardiac arrest, and died. An autopsy revealed that the victim's heart muscles were excessively thick and scarred, which is a condition commonly called a "heavy heart." This condition makes a person susceptible to a heart attack. Until the autopsy after his death, no one knew that the patient had a heavy heart. The strain of the operation, which is unproblematic for a normal heart, caused cardiac arrest in this patient.

When the patient died, his descendants sued the anesthesiologist. Plaintiff made two accusations of negligence by the anesthesiologist. First, plaintiff alleged that the anesthesiologist had not given adequate tests before the operation to determine if the patient had a condition such as a heavy heart. Second, plaintiff alleged that when the patient began to have trouble breathing during the operation, the anesthesiologist responded too slowly and incorrectly.

Consider the rules of evidence the court used to weigh the facts. The plaintiff had to prove by a preponderance of the evidence that the defendant's negligence caused the victim's death. We will focus on the legal rules for combining evidence to construct such a proof.

Figure 11.4 depicts the court's problem as a decision tree. The first branch indicates that the anesthesiologist may have been negligent or nonnegligent in the pre-operation screening. "Preponderance of the evidence" will be interpreted as a probability of .5 or greater. According to Figure 11.4, the evidence indicates that the probability is .4 that negligence in pre-operation screening caused the patient's death. Consequently, the plaintiff has not proved negligence in the pre-operation screening by a preponderance of the evidence.

FIGURE 11.4

Anesthesiologist's
decisions.
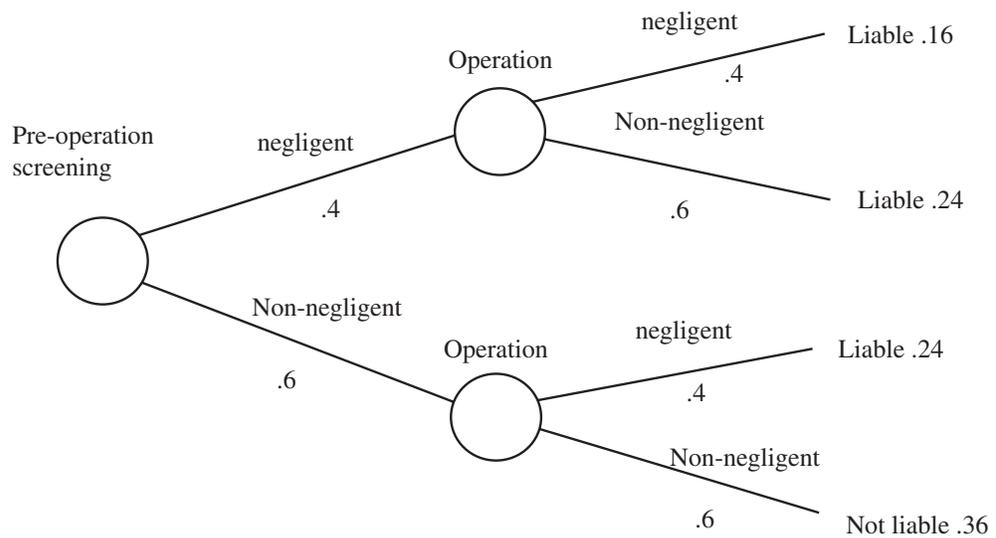
In the second branch of the tree, the anesthesiologist may have been negligent or nonnegligent in the operation. According to Figure 11.4, the evidence indicates that the probability is .4 that negligence in the operating procedure caused the patient's death. Consequently, the plaintiff has not proved negligence in the operating procedure by the preponderance of the evidence.

We have shown that independent and sequential application of the standard of the preponderance of the evidence leads to the conclusion that the anesthesiologist was not negligent. What about combining probabilities to reach an overall judgment? If the probabilities on each branch of the tree are independent,[21] the laws of probability theory prescribe a simple rule to combine them: the multiplication rule. Applying this rule to Figure 11.4, the probability that the anesthesiologist was *not negligent* in the pre-operation screening and also not negligent in the operating procedure is $.36(= .6 \times .6)$, as indicated on the decision tree. The probability that the anesthesiologist was *negligent* in the pre-operation screening or in the operating procedure is $1 - .36$, which equals .64. Thus, the preponderance of the evidence indicates that the defendant's negligence caused the patient's death one way or the other.

The decision tree clarifies the fact that independent and sequential application of the preponderance of the evidence standard sometimes gets a different result from an overall judgment. The latter approach is more nearly correct from the viewpoint of probability theory. The court in Oakland, California, gave ambiguous instructions to the jury that did not distinguish between these two ways of reasoning. This case illustrates that

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[21] From the plaintiff's argument, it seems that the alleged negligence was the result of a lapse in judgment by a generally sound physician, which is consistent with our assumption of independent probabilities. The plaintiff did present an argument that linked negligence in the two acts. For example, the plaintiff did not argue that the anesthesiologist suffered from a temporary case of inattention (for example, a hangover), or a permanent case of bad judgment (for example, bad training).

courts have formulated rules of reasoning with insufficient striving for consistency with probability theory.[22]

Much remains to be done to reconcile the rules of legal procedure with sound statistical reasoning. Some of that research is underway, such as explaining the interaction between the burden of proof, the standard of proof, and the severity of the legal sanction.[23] Perhaps the rules of procedure will get rewritten in the future to achieve a higher degree of economic and statistical rationality.
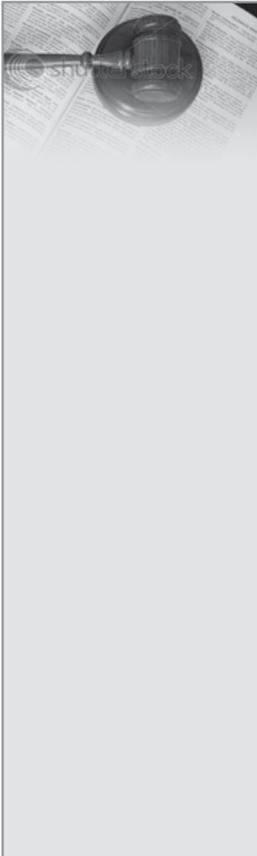
Rent-A-Judge

In the Soviet Union, people stood in long lines to buy bread from state bakeries. In many countries, citizens wait in long lines to litigate their disputes in state courts. In Los Angeles, as in most major cities, it can take several years before disputes are decided in a public trial. In Los Angeles, unlike most other places, a private alternative exists that is a close substitute for a public trial. The parties can agree to "rent" a retired judge to decide their case. The resulting private trial is usually held in a mutually convenient place, such as a hotel suite. The retired judge usually conducts the trial in an informal manner, without the concern for procedure shown in public trials. The case is decided by application of the relevant state law. The judge's final decision is, furthermore, registered with the state court and has the full effect of a decision in a public court.

Critics say that "rent-a-judge" is unfair to the poor because only the rich can use it. Proponents say that everyone benefits: People who rent judges benefit from a speedy trial, and others benefit indirectly from relieving the congestion in the public courts. Notice that renting a judge changes judicial motivation. Suppose you were a retired judge who decided to participate in a rent-a-judge program. In your former role as a public judge, you were supposed to be "independent." That is, the income that you enjoyed as a public judge was unrelated to how you decided cases. Now that has changed. Your income is directly determined by how often you are "rented." To be rented, you must be chosen by both parties to a potential dispute.

QUESTION 11.14: In what ways do you think a "rent-a-judge" who sought to maximize income might decide cases differently from an independent public judge?

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[22] A more detailed discussion of this actual case, including its psychological dimension, is in Robert Cooter, *Adapt or Optimize: Psychology and Economics of Evidence Law*, in GERD GIGERENZER & CHRISTOPH ENGEL, EDS, HEURISTICS AND THE LAW (2006).

[23] Preliminary research by Louis Kaplow is exploring this connection. Here is an example of the kind of clever argument that he has made: Increasing the burden of proof or the standard of proof results in more wrongdoers escaping the sanctions that they deserve. It also results in more rightdoers escaping sanctions that they did *not* deserve. The optimal burden of proof trades off the social cost from less deterrence of wrongdoing and the social benefit from less deterring of rightdoing. Instead of merely lowering the burden of proof, however, suppose the authorities also increase the sanction for wrongdoing. The authorities could increase the sanction just enough to hold the level of wrongdoing constant. However, the amount of rightdoing might remain higher, thus producing a net social gain. If high sanctions are cheap, then net social benefits are maximized by a high burden and a high standard of proof, and a severe sanction.

QUESTION 11.15:   Rules of evidence can change behavior, as shown by this example used by philosophers. Forty percent of the buses in a town are operated by the Red Bus Company, and 60 percent are operated by the Blue Bus Company. A bus unknowingly injures a bicyclist at night and the victim sues the Blue Bus Company. An eyewitness testifies that he saw a bus hit the bicyclist, but darkness prevented him from telling whether the bus was red or blue. If recovery on the probabilities is not allowed by the court, what will be the effect on incentives for precaution by the bus companies? If recovery on the probabilities is allowed, what will be the effect on the Red Bus Company's incentives to merge with the Blue Bus Company?

QUESTION 11.16:   Assume that you are one of the people contemplating "crashing the gate" at the rock concert as described previously. Are you more likely to be deterred if the court accepts or rejects probabilistic reasoning? If the court accepts probabilistic reasoning and you are not deterred, would you rather crash the gate alone or recruit others to join you?

QUESTION 11.17:   The probability of flipping a coin two times and getting all heads is $.5^2 = .25$. Suppose that liability in a tort case requires the plaintiff to prove that the defendant caused the injury and that the defendant's behavior was negligent. The plaintiff presents evidence proving each proposition with probability .7. Thus, the probability that both propositions are true equals $.7^2 = .49$. Apparently, the preponderance of the evidence supports each proposition separately but not jointly. How should the court decide the case?

II. An Empirical Assessment of the Legal Process

Does the legal system minimize the sum of administrative costs and error costs? We developed some theories relevant to this question by analyzing the stages of the litigation process. Now we turn to the relevant empirical research, beginning with some basic facts about the United States.

In 2009 in the federal judiciary there were almost 260,000 civil complaints filed, about 240,000 civil cases terminated, and just over 300,000 civil cases pending. These figures represent a 5 percent increase in filings over those in 2008, a 0.2 percent increase in terminations over those in 2008, and a 7.1 percent increase in civil cases pending over those in 2008.[24] With respect to federal criminal cases filed, terminated, and pending in

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[24] There are some terms of art in this section that bear comment. A "legal complaint" is a submission to a court asking for adjudication of a grievance or resolution of an allegation of criminal conduct. The legal system then "disposes" of the complaints submitted to it in a variety of different ways. Some complaints are dropped; some are resolved by settlement bargaining among the parties; some are resolved by pretrial motions and summary judgment; some are dismissed; some are pending (that is, awaiting resolution); some are in the process of being transferred to other courts; and some go to trial for litigation to a judgment. In the ideal world, 100 legal complaints result in 100 dispositions. As we will shortly see, of those 100 complaints somewhere between 3 and 5 of them result in trial. The vast majority of legal complaints are disposed of by means other than trial.

2009 the figures are 75,000 filed, 74,000 terminated, and about 74,000 pending. Those are increases of 7.9, 9.3, and 0.8 percent over comparable figures for 2008.

The figures for civil and criminal complaints, terminations, and pending cases in state courts are not readily available for 2009 on a national basis. Rather, there are 50 separate state court reports, typically for earlier years. We know, on the basis of past comparisons, that the state courts deal with many more civil and criminal legal disputes in any given year than do the federal courts. To illustrate, note that in 2008 the courts in the State of Illinois alone had more than 750,000 civil filings (almost three times the total number of civil complaints in all federal courts in 2009).[25]

How were these cases disposed of? We have good figures for the disposition of legal complaints for cases in the federal courts and good reasons for believing that the figures for dispositions of complaints filed in state courts follow a similar pattern. The last time that we had comparable figures for both sets of courts was in 2000, and we have good reason for believing that the ratios are the same today as they were then. In 2000 we know that the federal courts disposed of almost 260,000 civil cases. Of that total slightly less than 2 percent were disposed of by means of a trial. (Only about 3100 or 1.2 percent of those cases were tried to a jury verdict, and about 1500 or 0.6 percent resulted in a bench verdict.) So, the federal courts disposed of 98.2 percent of the civil complaints in some other way. More than half (53.3 percent) were dismissed for lack of jurisdiction, voluntary dismissals, settlements, or other causes of dismissal. About 20 percent (18.5 percent) were transferred to another court for further proceedings, re-manded to state courts, resulted in judgments on an award by arbitrators, fresh trials following arbitral judgments, or other judgments. Another 13 percent were resolved through pretrial motions, and slightly more than 8 percent were disposed of by default judgments.[26]

What about the trend over time? Total dispositions of all criminal and civil disputes in the U.S. state and federal courts increased by a factor of three between 1981 and 1992, but have fallen significantly since then. The long-term pattern of civil disputes resolved by trial during the twentieth century has been one of slow, steady increase through the first half of the century, followed by a slow (and then accelerating) turn away from litigation, a trend that continues through the early twenty-first century. Contract disputes have, until recently, been far more numerous than any other kinds of civil disputes in the courts. Beginning sometime in the mid-1990s, however, tort disputes surpassed contract disputes as the leading form of civil litigation. The number of property disputes is far behind both tort and contract disputes.

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[25] In 2002 there was a total of 20 million civil complaints filed in all federal and state courts, of which approximately 250,000 were filed in all federal district courts. So, as a rough approximation, there are about 80 times as many civil complaints filed in state as in federal courts. That is, about 98 percent of all civil complaints are filed in state courts. A slightly higher percentage of all criminal complaints is filed in state courts.

[26] A "default judgment" occurs when one of the parties fails to appear or contest the complaint, so that the other party wins "by default." The remaining (roughly) 5 percent of dispositions are either not recorded or were pending resolution. The figures come from Chris Guthrie, *Procedural Justice Research and the Paucity of Trials,* J. Disp. Res. 127 (2002). Guthrie notes that approximately 35 percent of legal complaints are resolved by means of pretrial motions or summary judgment.

A. Lawyers

Giving legal advice, filing legal complaints, and disposing of them requires lawyers. Different countries have substantially different numbers of lawyers per capita. The American Bar Association estimated in 2005 that there were 1.1 million lawyers in the United States, or one lawyer for every 275 people. (In 2009 the figure was 1.2 million, or one lawyer for every 260 people.) For comparison, Germany in 2005 had one lawyer for every 622 people, the United Kingdom had one lawyer for every 496 people, and Japan had one lawyer for every 5,800 people.[27]

Is having more lawyers per capita a good thing? Most lawyers are "transaction cost engineers"—to use Ron Gilson's phrase[28]—who mostly remove impediments to cooperation among private parties (as we argued in Chapter 4's Normative Coase Theorem). Without them, people would have more difficulty establishing businesses organizations, hiring employees, setting up trusts, or dissolving marriages, to name a few activities requiring legal support for cooperation.[29] Legal education and the bar should ideally supply competent lawyers without artificially constraining their numbers or controlling prices. In these conditions of fair competition, the people who hire lawyers are the best ones to judge their own needs for legal services. Unfortunately, everywhere the history of the bar is a story of constrained supply and monopoly practices. Recent U.S. history, fortunately, is a new story of overcoming some of these constraints and dismantling some monopoly practices, especially by allowing lawyers to advertise their services in various ways.

B. Trials

In this section we consider three topics regarding trials—their costs, which disputes go to trial and who wins, and what explains the fact that trials are becoming increasingly rare.

1. The Costs of Trials   No one is sure of the total or average costs of all civil disputes in the United States, but we do know something about the costs of various parts of the trial process.[30] For example, we know something about "filing fees," the cost of asking a court to resolve a dispute. Those fees differ according to the jurisdiction and the amount in controversy. In Cook County, Illinois—that is, Chicago—the cost to

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[27] In 2005 Germany had approximately 130,000 lawyers in a total population of 82.5 million, in 2004 the United Kingdom had 121,000 lawyers in a total population of 60.2 million, and in 2005 Japan had 22,000 lawyers in a total population of 128 million. Japan has recently embarked on a reform of its legal education system to increase the number of lawyers.

[28] Ronald Gilson, *Value Creation by Business Lawyers: Legal Skills and Asset Pricing,* 94 YALE L. J. 239, 301–2 (1984).

[29] Some empirical evidence suggests a positive causal relationship between the number of lawyers per capita and a nation's growth rate, which is consistent with the proposition that lawyers are principally transaction cost engineers. See Frank B. Cross, *The First Thing We Do, Let's Kill All the Economists: An Empirical Evaluation of the Effects of Lawyers on the United States Economy and Political System,* 70 TEX. L. REV. 645, 689 (1992).

[30] Charles Silver, *Does Civil Justice Cost Too Much?,* 80 TEX. L. REV. 2073 (2002).

initiate a civil action is scaled according to the stakes at issue in the action: $244 if the controversy involves less than $15,000, and $114 if under $250. In Champaign County, Illinois, the fees are not scaled by the size of the controversy; they are a flat $215. But there are additional charges for such matters as appearance fees; confession of judgment and Law Library fees; counterclaim, third-party action, and contribution fees; jury fees (depending on whether the size of the jury is 6 or 12 persons); garnishment-of-wages fees; fees for issuing a summons; and more.[31] These costs for a routine civil action can mount into the thousands of dollars quickly.

We also have cost figures on pretrial discovery. The Civil Litigation Research Project examined about 1600 cases from federal and state courts and found that there was no discovery in more than half of those cases. Where there was discovery, there were no more than five "discovery events." A RAND study concluded, "Discovery is not a pervasive litigation cost problem for the majority of cases. The empirical data show that any problems that may exist with discovery are concentrated in a minority of the cases."[32] That same RAND study found that discovery typically consumes "about one-fourth to one-third of total lawyer work hours per litigant. Discovery accounted for less than half the lawyer work hours in all the subsets of general civil cases that we examined." The amount of discovery tends to increase with the stakes in the trial, but even when the stakes were more than $500,000, discovery rarely accounted for more than 30 percent of the lawyers' work hours on the case. Lawyer hours are the biggest component of litigation costs.

Charles Silver concluded that about 3 percent of legal complaints are resolved by trial and 97 percent are settled out of court (or resolved in some other manner). By comparison to litigation, settlement is much cheaper. Samuel Gross and Kent Syverud found that a typical trial lasted nine days, and a typical negotiation to resolve a similar matter lasted nine hours.[33]

We can use these numbers to make back-of-the-envelope estimates of the cost of each. An American trial usually involves a prosecutor, or plaintiff and his lawyer, a defendant and his lawyer, a judge, a 12-person jury, a court stenographer, and a court guard. There are usually witnesses—one testifying and others waiting to testify. That adds up to roughly 20 people, whose labor or opportunity costs vary widely. Lawyers may bill their trial time at $250 per hour, so that an hour of a trial costs $500 in lawyers' fees. (That does not include any time outside of court preparing for trial.) If the trial takes four hours per day, then the trial cost of the lawyers is $2000 per day. The judge is paid on an annual basis whether there are trials or not. Nonetheless, let us impute to the judge's time a figure comparable to that of the lawyers ($250 per hour) and assume that the cost of the judge's time is $1000 per day of trial. Jurors are usually compensated at a rate of something like $10 per day, which is far below the opportunity cost of their time.

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[31] In more rural counties of Illinois those filing fees are less. For example, in relatively sparsely populated Monroe County in the southwestern portion of Illinois, the filing cost for a civil action is $173.

[32] Silver, supra n. 30, at 2095.

[33] See Samuel Gross & Kent Syverud, *Getting to No: A Study of Settlement Negotiations and the Selection of Cases for Trial,* 90 MICH. L. REV. 319 (1991).

There are usually 12 of them (although not all civil trials are jury trials) for a total cost of $120 per day. If we estimate the average value of the labor of the additional participants at, say, $40 per hour, then the labor value of the additional five participants amounts to $200 per hour or $800 per day of trial. That gives us a total social cost per day of trial equal to slightly less than $4000.

Now we convert these daily costs into costs per trial. If we use the estimate that a civil trial takes nine days on average (as Gross and Syverud found), then the total social cost of the average civil trial would be $36,000.

These numbers underestimate the social cost of trials because they exclude the time spent preparing for trial, the cost of the administrative and support staff for the judge and the lawyers, the opportunity cost of the time spent by the jury and witnesses, and the implicit rental value of the court room.

On the other side of the ledger, we have not attempted to estimate the social benefits of trial, which include the benefit to the private parties of resolving their dispute, setting a baseline for bargaining in the cases that settle without a trial, deterring wrongdoing and harm by potential defendants, and improving laws by the evolution of new precedents. In any case, full trials are not worthwhile socially unless the stakes are substantial. This fact provides an incentive to avoid trials by alternative resolution of disputes, or to simplify trials as in small claims courts.

2. The Selection Effect and the 50-Percent Rule   Earlier in this chapter we developed a theory of how a rational party would decide between litigation and settlement. We concluded that the major cause of trials is relative optimism—each side expects to do better at trial than the other side believes it will do. Put differently, the major cause of trials is the parties' private information that makes them disagree about the trial's likely outcome. As a result, disputes that result in trials rather than settlements must have characteristics that produce relative optimism. The disputes that go to trial are a biased set of all disputes with respect to the characteristics that cause expectations to diverge. Because of this "selection effect," the distribution of characteristics of disputes resolved by trial differs from the distribution of characteristics of all disputes.

In 1984 George Priest and Benjamin Klein published an influential paper on these matters.[34] They conjectured that each party is equally likely to make the mistake resulting in false optimism that causes a trial. Because each party is equally likely to be mistaken, they inferred that each party is equally likely to win at trial. Moreover, where both parties agree that the likelihood of a plaintiff victory is relatively high or that a defendant victory is relatively high, the parties are likely to settle. On average, the likelihood that plaintiffs will win at trial is, consequently, the same as the probability that the defendant will win, approximately 50 percent.

If each party is equally likely to be mistaken, does it follow that each party is equally likely to "win," as this word is understood in legal disputes? We need to look carefully at whether theory justifies this strikingly simple conclusion. At trial, a "win" for the plaintiff

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[34] George L. Priest & Benjamin Klein, *The Selection of Disputes for Litigation,* 13 J. LEGAL STUD. 1 (1984). Priest and Klein also held that there is no simple set of characteristics that distinguishes litigated from settled cases.

usually means that the court awards damages to the plaintiff. There is no reason why the plaintiff should win half of the time by this definition. To see why, consider that the defendant in many disputes concedes liability and contests damages. Thus, the defendant may concede that his negligence caused a dent in the plaintiff's car but denies that his negligence caused the broken headlight. In these circumstances, the definition of a plaintiff "win" at trial cannot mean that the plaintiff wins *something,* which occurs with 100 percent certainty. Rather, the definition of a plaintiff "win" must mean something like "the court awards the plaintiff higher damages than the defendant expected to pay."[35]

Another possible definition of "winning" occurs in the symmetrically opposite case, where the defendant concedes damages and contests liability. To illustrate, assume that the defendant concedes the plaintiff's claim that damages equal $1000 but vigorously contests that he is responsible for those damages.

Steve Shavell has argued that the Priest-Klein prediction makes very special assumptions—namely, that the "parties obtain very accurate information about trial outcomes" and the "information that each receives is statistically identical." Shavell notes that these assumptions rule out such likely situations as one or both parties' not having accurate information about trial outcomes or one party's having "substantially superior information to the other." As a result, Shavell shows that "it is possible for the cases that go to trial to result in plaintiff victory with any probability. Moreover, given any probability of plaintiff victory at trial, the probability of plaintiff victory among settled cases (had they been tried) may be any other probability."[36] So, the case for 50 percent victory by plaintiffs at trial is weak in theory.

The question remains whether the 50 percent rule is true in fact. Perloff and Rubinfeld examined antitrust cases in the late 1970s and early and mid-1980s and found that defendants won about 70 percent of those cases.[37] Donald Wittman examined a sample of rear-end automobile collision cases in California and concluded that the data set did not confirm the 50 percent rule.[38] Theodore Eisenberg found that plaintiff win rates were approximately 50 percent in products liability cases but were less than 40 percent for medical malpractice cases in federal court.[39] Jeremy Waldfogel

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[35] In civil law systems of Europe, where the loser pays the winner's legal costs, the defendant in such a case will have to pay the plaintiff's legal costs if the court's judgment exceeds the defendant's settlement offer.

[36] Consideration of differences in the costs of litigation to the two parties further undermines the 50 percent rule. Steven Shavell, *Any Frequency of Plaintiff Victory at Trial Is Possible,* 25 J. Legal Stud. 493 (1996).

[37] Jeffrey Perloff & Daniel Rubinfeld, *Settlement in Private Antitrust Litigation*, in Steven Salop & Lawrence White, eds., Private Antitrust Litigation (1987). See also Perloff, Rubinfeld, & Paul Ruud, *Antitrust Settlement and Trial Outcomes,* 78 Rev. Econ. & Stat. 401 (1996).

[38] Donald Wittman, *Is the Selection of Cases for Trial Biased?,* 14 J. Legal Stud. 185 (1985). George Priest responded by examining a set of rear-end auto collision cases in Cook County, Illinois, and found support for the 50 percent rule in that data set.

[39] See Theodore Eisenberg, *Testing the Selection Effect: A New Theoretical Framework with Empirical Tests,* 9 J. Legal Stud. 337, 349 (1990). "The 50 percent hypothesis may be rejected while the basic selection effect is retained." In a later study with Kevin Clermont, Eisenberg found the somewhat puzzling result that plaintiff win rates were substantially higher when the dispute was tried to a judge rather than to a jury, which is puzzling because they choose to try their complaint before a jury in 90 percent of all cases. Kevin Clermont & Theodore Eisenberg, *Trial by Jury or Judge: Transcending Empiricism,* 77 Cornell L. Rev. 1124 (1992).

tested the 50 percent rule for a selection of contracts, intellectual property, and tort cases from the mid-1980s from the Southern District of New York. He found that when relatively few cases within a category go to trial, the plaintiff win rate tends to be close to 50 percent. When the trial rate increases, however, plaintiff success rates diverge from 50 percent—in some instances higher and in others, lower.[40]

Finally, Kessler, Meites, and Miller, focusing on appellate cases rather than those from trial courts, sought through regression analysis of more than 3000 cases to find causes for deviations from the 50 percent rule. Taking into consideration differences in stakes, information, settlement, and litigation costs, and four other dispute-specific characteristics, they found that these characteristics affect win rates in statistically significant ways. Furthermore, these effects are consistent with predictions by the models in this and the preceding chapter.[41]

So, the empirical evidence on the 50 percent rule is mixed: Some studies find it to be borne out by the evidence; others suggest that it is not; some find the rule to be true only in certain kinds of disputes but not true in other kinds of disputes; and some find that the evidence supports the hypothesis but only in the restrictive circumstances in which Priest and Klein suggested that it would hold.

3. Vanishing Trials?   The United States has a reputation as a highly litigious society, but that view is not consistent with the facts that less than 5 percent of legal disputes are resolved by trial and that civil trials have declined in the United States over the last 40 years. That is the heart of an important article by Professor Marc Galanter.[42] Galanter shows that even though the total number of dispositions of disputes has increased by fivefold between 1962 and 2002, the number of civil trials in all courts in the United States in 2002 was more than 20 percent lower than in 1962. Not lower per capita—relative to the number of people in the United States—but lower in absolute numbers. Disposition of disputes by trial in 2002 "was less than one-sixth of what it was in 1962—1.8 percent, as opposed to 11.5 percent in 1962." The decline in trials is recent and steep, not slow and steady over the course of the 40-year period. In fact, the number of civil trials in federal courts increased from 1962 to 1985 and then dropped by more than 40 percent from 1985 to 2002.[43] At the same time as the number of civil trials has been falling, the percentage of trials that are before juries, rather than bench trials, has been increasing. By 2002 two-thirds of all civil trials were jury trials.[44] Since

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[40] Joel Waldfogel, *The Selection Hypothesis and the Relationship between Trial and Plaintiff Victory,* 103 J. POL. ECON. 229 (1995).

[41] Daniel Kessler, Thomas Meites, & Geoffrey Miller, *Explaining Deviations from the Fifty-Percent Rule: A Multimodal Approach to the Selection of Cases for Litigation,* 25 J. LEGAL STUD. 233 (1996).

[42] Marc Galanter, *The Vanishing Trial: An Examination of Trials and Related Matters in Federal and State Courts,* 1 J. EMP. LEGAL STUD. 459 (2004). That issue of the *Journal* also contained responses to Galanter's article by a distinguished group of legal scholars.

[43] Galanter says that the trends in state courts, where, recall, almost 98 percent of all litigation takes place, reflect those in the federal courts.

[44] It is not clear that these same trends with respect to bench and jury trials are true for the reduced number of state court trials over the 1962–2002 period.
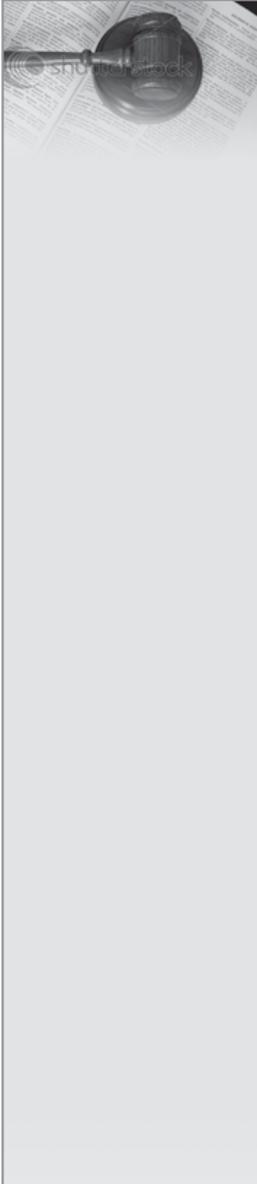
Forum Shopping

Lawyers frequently have a choice about where to file a complaint—a decision called "forum shopping." Thus, the plaintiff may search for the most favorable jurisdiction to file a complaint, and the defendant may respond by requesting removal of the case from the state court for decision in a federal court. (The defendant can ask for such a change when the plaintiff and defendant reside in different states.) Forum shopping has increased significantly over the last 30 years. In 1970, 15 percent of state court cases were removed to federal courts, presumably by defendants who asked for removal after plaintiffs filed their complaints. In 2000, more than 30 percent of state court cases were removed to federal courts.

As a theoretical matter, it is not clear whether forum shopping is efficient. If litigants can choose among jurisdictions in deciding where to have a trial, then that may create an incentive for jurisdictions to compete among themselves in the provision of better litigation services. They may, for instance, offer clearer substantive law, more rapid decisions, and specialized services. Delaware, according to this theory, has made itself a particularly attractive venue in which to try matters of corporate law. But this jurisdictional competition may have a dark side, too. States might compete not by offering better justice but by promising cheaper justice or justice tailored to noncorporate clients or for corporate clients. Some jurisdictions, for instance, have in the past decade or so become famous as venues friendly to plaintiffs. It is not yet clear whether, on balance, forum shopping is a good thing (a "race to the top") or a bad thing (a "race to the bottom").[45]

Why has there been an increase in forum shopping? Kevin Clermont and Ted Eisenberg examined more than 3000 cases in which diversity of citizenship would have allowed the plaintiff to file the complaint in the plaintiff's state, the defendant's state, or federal court.[46] They reasoned that the plaintiff would seek out a plaintiff-friendly jurisdiction in which to file suit, and the defendant would seek to remove the case to a more defendant-friendly jurisdiction. Consequently, Clermont and Eisenberg predicted that the plaintiff would be more likely to win those cases that remained in the jurisdiction originally selected by the plaintiff, than in those cases in which the defendant successfully removed the dispute to a federal court. And that is precisely what they found. Plaintiffs were successful in just over 70 percent of all the cases, but in only 34 percent of those removed to federal court. An important implication of this study is that the initial ability to shop for a forum favors the plaintiff, and the ability to remove the case to a federal court favors the defendant.

1962 the number of bench trials has fallen by almost 50 percent, and the number of jury trials has increased by almost 9 percent.

The change in the types of litigation has also been significant. For instance, in 1962 tort cases made up 55 percent of all civil trials and 81 percent of all civil jury trials. By 2002 torts had dropped to just 23.4 percent of all civil trials and 26 percent of all civil jury trials. By contrast, in 1962 contract disputes made up almost 20 percent of all civil trials. Almost 75 percent of those trials were tried before a judge without a jury.

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[45] See Daniel Kessler & Daniel Rubinfeld, *An Empirical Study of the Civil Justice System*, in A. MITCHELL POLINSKY & STEVEN SHAVELL, EDS., HANDBOOK OF LAW AND ECONOMICS, V. 1 (2007).

[46] Kevin Clermont & Theodore Eisenberg, *Litigation Realities*, 88 CORNELL L. REV. 119 (2002).

In 2002 contracts counted for about 15 percent of all civil trials with 53 percent of them tried to a jury. In the 1980s there were more contract than tort cases filed in the federal courts. Taken together, contract plus tort trials fell from being 74 percent of all civil trials in 1962 to being 38 percent in 2002. What trials took their place?

In 1962 civil rights trials accounted for less than 1 percent of all civil trials. In 2002 they accounted for 33 percent of all trials and for 41 percent of all jury trials. Among other controversies, the two categories that stand out are labor cases and IP cases. The same overall trends apply to them—namely, a rise and then a recent fall in the number of trials; an ever-decreasing percentage of dispositions by trial; and a shift from a small to a substantial portion of jury trials.

Do the same trends apply to criminal trials? The short answer is, "Yes." Criminal caseload in the federal courts has risen from 33,110 in 1962 to 76,827 in 2002, and then to about 75,000 in 2009, about half the rate of increase on the civil side. Today there is a smaller percentage of criminal dispositions by trial—less than 5 percent in 2002 compared with 15 percent in 1962. The absolute number of criminal trials has diminished by 30 percent between 1962 and 2002.

One possible explanation for the decline in criminal trials is the implementation of determinate sentencing in the federal courts. The sentencing guidelines offer an incentive to avoid trial in the form of a criminal offense level reduction for "acceptance of responsibility." Since implementation of the guidelines in November, 1987, the number of criminal trials has declined. From 1962 to 1991 the percentage of trials in criminal cases was relatively steady between 13 and 15 percent. However, since 1991 the percentage of trials in criminal cases has steadily decreased (with the exception of a 0.06 percent increase in 2001) from 12.6 percent in 1991 to less than 4.7 percent in 2002. As we shall see in Chapter 13, this decline is consistent with the significant decline in the number of crimes in the United States that began in the early 1990s.

Why has there been this dramatic decline in the number of trials? Galanter canvases a wide variety of possible explanations. For example, he rejects the possibilities that there has been some significant change in procedural law, that class actions have replaced individual causes of action, and that there is a dearth of judges to hear cases.[47]

There are three related explanations for the phenomenon that deserve further study. First, the relative cost of trials may have increased significantly (perhaps because controversies have become more complex, requiring more lawyering, more specialized lawyers, more expert witnesses, more jury consultants, and so on).

Second, this increase in relative costs might induce disputants to substitute away from trials and toward alternative methods of dispute resolution. In one of our earlier Web Notes we have shown that one of the attractions of arbitration and mediation is that it is much cheaper and less time-consuming than litigation. Even so, there is some casual evidence to suggest that the rise in ADR has not been sufficient to replace the large number of "vanished trials." We know that ADR increased significantly in the 1990s but probably not by enough to account for the 300,000 contracts cases that have "disappeared" from the federal courts since the 1980s. As late as 1992 arbitration

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[47] See our website for more information on Galanter's article.

accounted for only 1.7 percent of contract dispositions and 3.5 percent of tort dispositions in the state courts in the nation's 75 largest counties.

Third, it might be the case that there are fewer trials because there are fewer disputes and that there are fewer disputes because there is better lawyering today that was the case in the past. If lawyers, acting as transaction cost engineers, have grown increasingly sophisticated at anticipating problems and either providing for their peaceful resolution *ex ante*, urging their clients to take more precaution so as to reduce the likelihood of injury, or more successfully negotiating solutions, then lawyers deserve some credit for the vanishing trial. There is some casual evidence against this proposition. Recall that dispositions increased fivefold between 1962 and 2002. The population of the United States increased from approximately 187 million in 1962 to 310 million in 2010. So, disputes per capita increased significantly over the period. But that could have been due to the increasing complexity of individual and economic life. There needs to be much more empirical work on this possible explanation before we dismiss the possibility that better lawyering is responsible for the vanishing trial.

C. Appeals

Sometimes the judgment in a trial is not the end of the story. One of the parties—even the winner—may feel that the trial court erred and that the result was unjust or inadequate. As a matter of right in the common law system, either party may appeal the trial court judgment to a higher court.[48]

An appeal is costly. The filing fees for docketing an appeal in the federal courts is $450 per party. There are additional fees for certifying the results and the record from the court below, for reproducing records from the trial court, certifying documents, and so on—all of which can add hundreds of dollars to the costs of appeal. Because appellate litigation is a specialty among attorneys, the hourly costs of hiring a lawyer to pursue an appeal are almost certainly higher—and possibly much higher—than the lawyers' fees for the original trial. For instance, in a contingent fee arrangement it is customary for the plaintiff's lawyer to receive 33 percent of an award at the trial court and 40 percent if the matter goes to an appeal and is successful. The higher percentage awarded the successful attorney at the appellate level suggests that there is more intense lawyering involved in an appeal.[49]

The economic theory of bringing an appeal is analogous to the decision to proceed to trial but with the cost difference noted above. However, for an appellate court to grant a "leave to appeal," there must be an error of law in the proceedings at the trial court. Because lawyers and trial court judges know this and because trial court judges are generally competent, there are relatively few errors of law that would warrant the costs of appeal. We can predict that these errors are so rare (and the additional costs of appeal so high) that the vast majority of trial judgments will not be appealed. And the statistics bear this out.

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[48] See the discussion of the appellate process in Chapter 3.

[49] There are no new witnesses or evidence to be presented in an appeal; so, filing and lawyers' fees are the principal expenses to the appellant and appellee.

We can begin to get a glimpse of the work of appellate courts by looking at some recent trends in appellate caseload for the State of Illinois and the federal judiciary. The table below gives important statistics on cases filed in circuit courts (the trial courts) and the appellate courts of Illinois between 2001 and 2005.

Year	Total Circuit Filings	Civil Circuit Filings	Appellate Filings	% of cases appealed
2004	4,240,300	685,557	8,060	0.0020
2005	4,213,700	672,731	8,153	0.0020
2006	4,220,121	706,836	7,838	0.0019
2007	4,455,546	773,204	7,631	0.0017
2008	4,305,551	753,569	7,630	0.0018

Note: The total caseload includes traffic, felony, dissolution of marriage, chancery, and other categories.

It is striking that such a small percentage—one-fifth of 1 percent—of all cases is appealed. Approximately half of all appeals are on criminal matters, and approximately half on civil issues.

Comparable figures on appeals for the federal judiciary come from the Administrative Office of the United States Courts for fiscal year ending September 30, 2009. The figures indicate that in the prior year the 13 federal Circuit Courts of Appeal dealt with 57,740 filings. During that same year, the U.S. District Courts dealt with a total of approximately 276,000 civil filings and 87,000 criminal filings for a total of 365,000 filings in 2009.

As a result, the rate of appeal in federal courts was approximately 16 percent, a much higher rate than was the case for the State of Illinois.

Is the rate of appeal too high or too low? Recall that in the United States, the trial court decides matters of fact and the appeals court decides matters of law. A decision about the law can lead to a new precedent, which is a new legal rule. The effects of a new precedent spill far beyond the litigants in the case in which the precedent is set. The litigants, consequently, internalize a small proportion of the value of a new precedent that resolves their dispute. Because appeals lead to changes in the rule that benefit many people, perhaps the judges should be able to pay more of the litigation costs of the parties when an appeal results in a new precedent. Thus, the full cost should be assigned at the trial level to all cases, not a fraction of the cost as is the usual practice, but a successful appeals that results in new precedents should be subsidized by the state.

Conclusion

Is the legal process a sharp instrument for deciding cases according to the law and the facts, or is it an unwieldy instrument to burden litigation with high costs that profit lawyers? The answer is complicated, like the architecture of an ancient building built and rebuilt over centuries. A combination of economic theory and facts suggests that the basic logic of the legal system serves to reduce injustice and errors, but a powerful legal profession has also influenced the rules to its own advantage.

Suggested Readings

Cooter, Robert, *Structural Adjudication and the New Law Merchant: A Model of Decentralized Law,* 14 Int. Rev. Law & Econ. 215 (1994).

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Spier, Kathryn, *Tied to the Mast: Most-Favored-Nation Clauses in Settlement Contracts,* 32 J. Legal Stud. 91 (2003).