1. Introduction

Contingent fees for the plaintiff’s attorney are the most pervasive form of payment in personal injury and medical malpractice litigation in the United States. Typically, the attorney receives a fixed percentage, often one-third, of the award or recovery if the case is won, and nothing if the case is lost. In one major study, 96 percent of individuals and 86 percent of organizations who were plaintiffs in tort litigation paid their attorneys on a contingent-fee basis (Kakalik and Pace, 1986: 96). Despite their widespread use, contingent fees are frequently criticized and often subject to regulation. In Great Britain and many other European countries, for example, they are banned entirely (see Pfennigstorf, 1984), although Great Britain is currently considering relaxing these restrictions.

This article shows that when the attorney has more precise information about the merits of the case, then the optimal compensation scheme will pay the attorney a share of the plaintiff’s award. The reason is simple: The plain-
tiff is forced to rely upon his attorney's recommendation on whether to pursue or drop the case. Concerns for reputation aside, if the attorney were paid either a fixed fee or an hourly fee, then she would have little financial incentive to reveal to her client that the case had a low expected return. Instead, she might lead the plaintiff blindly into litigation regardless of the case's merit. When the attorney is paid a contingent fee, however, then she will act in her clients' interest and pursue only those cases with a sufficiently high expected return.

Our work has several important policy implications. First, we present an efficiency argument in favor of contingent fees. The contingent-fee contract represents an optimal contractual relationship between the client and his attorney. Second, we show that the contingent-fee system may reduce the proportion of frivolous lawsuits. Since the attorney has a financial stake in the case, she is inclined to drop suits with a low expected return and devote her energy to more meritorious claims. Finally, in a world without contingent fees, injured parties have good reason to distrust lawyers and may be deterred from seeking legal recourse at all. This may well have an adverse effect on ex ante incentives to take precautions against accidents.

Economists and legal scholars have offered several economic explanations for contingent fees. First, contingent fees may be a mechanism for financing cases when the plaintiff is liquidity constrained and capital markets are imperfect (see, e.g., Rhein, 1982; Shrag, 1985). Second, they may allow the attorney and her client to share risk in an efficient way (Posner, 1986: 534). Third, they may be a response to a moral hazard problem: If the client cannot observe (or cannot contract upon) his attorney’s effort, then linking the attorney’s fees to the trial’s outcome induces the attorney to exert a higher, more efficient level of effort than could be implemented using hourly or fixed fees (see Danzon, 1983; and Schwartz and Mitchell, 1970). Finally, our article and that of Scotchmer and Rubinfeld (1993) show that contingent fees may be a response to asymmetric information between the plaintiff and his attorney. Scotchmer and Rubinfeld suppose that the attorney has better information about her own ability and that the plaintiff has better information about the merit of his case. Here, we assume that the attorney is better informed about the merits of the plaintiff’s case, and, unlike Scotchmer and Rubinfeld, we assume that the parties are symmetrically informed when the contract is announced.

2. Katz (1990: 26) and Clermont and Currivan (1978: 571–72) conjectured that contingent fees may serve to screen out frivolous claims. Most previous studies of frivolous suits have focused upon asymmetric information between the plaintiff and the defendant. Katz, for example, analyzes a model in which a plaintiff, knowing his claim is without merit, sues an uninformed defendant with the goal of extracting a settlement.

3. There is another possible effect, however. Since lawyers will not drop frivolous claims, too many cases could be brought, leading injurers to take too many precautions.

4. From an economic theorist's perspective, these two reasons are similar, since limited liability may be viewed as having the same consequence as extreme risk aversion.

5. Miller (1987) examined the impact of contingent fees on the attorney's incentive to settle a case, and showed that the attorney would be willing to settle for a lower amount than would the
In our work we do not attempt to encompass the other explanations of contingent fees, nor do we try to resolve the debate about which explanation of contingent fees is the most important. Although it is intended to complement the other explanations, our theory is particularly attractive because it is consistent with a number of empirical regularities:

First, many lawsuits are dropped before reaching trial. The empirical evidence suggests that plaintiffs file lawsuits with the expectation that the case will be pursued only if the expected return is sufficiently high. When the plaintiff is relatively uninformed, then his attorney plays an extremely important role both in determining the merit of the case and in deciding whether or not to pursue it.

Second, contingent fees are less prevalent in certain types of civil lawsuits, such as contract disputes brought by commercial or corporate plaintiffs. This is not surprising, since corporate clients are often better informed about the nature of the case and are more effective monitors than individual plaintiffs. Recent survey data suggests that clients who play an active role in case preparation and are more involved in the decision-making process are much less likely to use contingent fees.

Finally, contingent fees are rarely used by defendants. Although our theoretical model is not directly applicable to defendants, it does suggest that this difference may arise from a fundamental asymmetry between the plaintiff and defendant. The plaintiff, not the defendant, must decide initially whether to pursue a case or to abandon it. Since a defendant has no choice but to defend himself when sued, the asymmetry of information probably generates fewer distortions for the defense attorney.

The next section of this article illustrates the basic incentive problem client. See also the empirical analysis of Thomason (1991). Our analysis, however, stresses that this conflict of interest is not necessarily inefficient: The value of the attorney’s time should have weight in the decision process.

6. In a study of medical malpractice claims, Farber and White (1991) established that a large percentage of suits are dropped shortly after the discovery process. They conjecture that hospitals often have private information about their own negligence in malpractice cases, and that the prosecution can learn that information only through discovery.

7. In the CLRP data set, 42 percent of plaintiffs’ attorneys in contract disputes were paid a contingent fee (Kritzer et al., 1985: 264).

8. They are also more likely to be repeat purchasers, thus strengthening reputational concerns, and less likely to be liquidity constrained or risk averse. However, these arguments cannot fully explain the difference since, as noted earlier, 86 percent of organizations that are plaintiffs in tort litigation use contingent fees to compensate their attorneys.

9. The CLRP data set includes a measure of client control of a case, which is constructed from survey responses on the level of client involvement and the client's role in decision-making. It is striking that high client involvement is inversely related to the use of contingent fees. Calculations based on the entire data set (tort and non-tort) show that 23 percent of plaintiffs with a high control level paid contingent fees, compared to 60 percent of plaintiffs with a low degree of control (Trubek et al., 1983: II-226). This is also consistent with the moral hazard theory.

10. Kaklik and Pace (1986) find that in the CLRP data set 95 percent of defense attorneys were paid an hourly wage, and the rest were paid a flat fee. For a discussion of some notable exceptions, see Annotation (1981).
through a simple numerical example. Section 3 demonstrates that in a competitive market for legal services the equilibrium compensation scheme will be linear in the award and analyzes the impact of contingent fees on the proportion of frivolous lawsuits and the volume of litigation. Section 4 discusses standard contingent-fee contracts that specify a fixed percentage of the award. Section 5 informally discusses the absence of contingent fees for defense attorneys. The final section of this article offers concluding remarks and considers the implications of our analysis for the continuing debate on the ethics and efficacy of the contingent-fee system.

2. A Simple Example

Suppose that a plaintiff has been injured in an accident and the value of his damages are assessed at $10,000. The likelihood that the plaintiff will prevail in court, $p$, is one of two values, 0 or 1/2, with equal probability. If the plaintiff and his attorney proceed with litigation, then the attorney will incur $1,000 in expenses. For simplicity, we suppose that the plaintiff’s personal expenses of proceeding are negligible. Clearly the plaintiff and his attorney ought to pursue the case when $p = 1/2$, because the expected award from litigation ($5,000) exceeds the cost incurred by the attorney–plaintiff team ($1,000). However, when $p = 0$, it is in the joint interest of the attorney and plaintiff to drop the case.

Consider two simple contracts. The first is an “hourly wage” contract in which the attorney is paid a fixed sum of $1,500 for her time if the case is pursued. The second is a contingent-fee contract in which the attorney receives 30 percent of the award, or $3,000, if the case wins and nothing if the case loses. Note that when the case is strong (i.e., $p = 1/2$) the attorney’s expected wage is $1,500, the same as for the hourly contract. Furthermore, note that when $p = 1/2$ the attorney’s expected compensation under both contracts exceeds the marginal cost of proceeding with the case. In general we expect that attorneys do receive wages in excess of their marginal cost, since operating a law firm involves overhead (or fixed costs) that must be recovered through client billing.\footnote{Overhead costs may include the costs of providing initial free consultations and the costs of pro bono work.}

Suppose that the plaintiff is unfamiliar with the law, or “uninformed,” and does not observe the value of $p$. His attorney, however, is an expert and can observe the value of $p$ perfectly. Which contract will the plaintiff prefer? Under the hourly fee, the attorney has a financial incentive to urge the client to pursue the case regardless of its actual merit: Her wage, $1,500, exceeds her cost, $1,000. The plaintiff, relying upon his prior beliefs, is always willing to go to court, and so under the hourly-wage contract his expected payoff is $1,000. Under the contingent-fee contract, however, the attorney will drop the case when $p = 0$: Her expected net earnings from pursuing the case are negative. Therefore the plaintiff’s expected return under the contingent-fee contract is $1,750, significantly higher than the hourly-wage contract.
Now suppose that the plaintiff is more sophisticated, and can observe the value of $p$ as well. Clearly the plaintiff need not rely upon the attorney’s expertise in deciding whether to drop the case. In this scenario, the hourly fee and the contingent fee perform equally well: the plaintiff will proceed with litigation if and only if $p = 1/2$, and his expected return is $1,750 under both contracts. Thus, under symmetric information about the merits of the case, the contingent-fee contract is not necessary.\footnote{In a more general specification, the plaintiff’s drop decision would not correspond perfectly to the ex post efficient decision rule. However, the efficient decision will always be made when the parties are symmetrically informed and renegotiation (with side payments) is possible. In Section 3, however, the equilibrium contract achieves the most efficient decision rule under asymmetric information, and therefore renegotiation is unnecessary.}

The example illustrates that contingent fees may outperform fixed or hourly wages when two conditions hold: First, the plaintiff does not directly observe the true merits of his case and must rely upon his lawyer’s recommendation on whether or not to pursue the case, and second, the lawyer earns ex post profits or rents on the cases she pursues (i.e., the equilibrium wage exceeds the attorney’s cost of litigating a case). The next section shows that an appropriately defined contingent-fee contract is the market’s response to these two conditions. The equilibrium contract will not, in general, exhibit a one-third share or a zero intercept. It will, however, be linear and increasing in the court’s award.

3. The Model

Imagine that there are a large number of plaintiffs and attorneys. Each plaintiff has a potential case characterized by a level of damages, $x$, and a probability of winning, $p$. These characteristics are assumed to be distributed according to a joint probability density function $f(x,p)$, where the support of $x$ is the interval $[x_-, x_+]$ and the support of $p$ is the interval $[0,1]$. Although this prior distribution is commonly known to the clients and their attorneys, only the attorneys are experts; the attorney learns $x$ and $p$, while the plaintiff does not and must rely upon his attorney’s decision to drop the case or proceed.\footnote{A more general model would encompass other aspects of the legal process, such as pretrial negotiation and the effect of lawyers’ actions on the outcome of the trial. However, such extensions would obscure our point and needlessly complicate the results.}

The timing is summarized in Figure 1. The fixed costs, $F$, represent the overhead costs of the law firm. The attorneys offer their services at date 1, and at date 2 litigants choose lawyers based upon their announced fee schedules. The cost incurred by the attorney at date 3, $c_1$, represents the cost of the attorney’s time and effort spent learning the case’s characteristics. $k_1$ represents the cost incurred by the plaintiff at date 3. One interpretation of the model is that $c_1$ and $k_1$ include the costs associated with the discovery process.\footnote{The plaintiff typically is responsible for expenses and disbursements such as expert-witness fees and filing fees, including those incurred by his attorney, regardless of the outcome of his case. In practice, however, law firms may absorb these expenses on behalf of liquidity-constrained clients if the case is dropped or lost.}

At date 4, after observing $p$ and $x$, the attorney must decide whether to
Date 0: Attorneys incur fixed costs \( F \).
Date 1: Attorneys simultaneously offer contracts.
Date 2: Plaintiffs observe the offers and select contracts.
Date 3: The attorney and plaintiff incur costs \( c_i \) and \( k_i \), respectively.
Date 4: True \{\( p,x \)\} observed by attorney.
Date 5: The attorney either drops the case or proceeds.
Date 6: The attorney wins \( x \) with probability \( p \), and loses with probability \( 1 - p \).
Date 7: The attorney is compensated according to the contract.

Figure 1. Timing of the model.

withdraw from the case or pursue it. (For the moment, we ignore the possibility that the client might want to abandon his attorney at this time. This assumption is discussed in Section 3.2.) If the attorney decides to proceed with litigation, then the attorney and plaintiff incur further costs \( c_2 \) and \( k_2 \), respectively. If the attorney withdraws from the case, then no further costs are incurred. At date 6, the plaintiff receives the award, \( x \), with probability \( p \). Without loss of generality, all costs are measured on a per-client basis. For technical convenience we assume that \( x > c_2 + k_2 \).

The (symmetric) equilibrium is defined to be a wage contract that satisfies the following three conditions: (i) an attorney cannot increase her profits by offering an alternative contract, (ii) an attorney cannot increase the payoff of her client(s) by offering an alternative contract (holding her own payoff fixed), and (iii) a new attorney could not profitably enter the market (i.e., equilibrium profits are equal to zero). It follows that the equilibrium contract is the one that maximizes the representative plaintiff’s payoff subject to a zero-profit constraint for the attorney.

Our model is consistent with the concept of monopolistic competition introduced by Chamberlin (1933). We imagine that attorneys offer horizontally differentiated products, and consequently face downward-sloping demand curves. Since attorneys are free to enter the market at date 0, their equilibrium profits will be driven to zero. Like firms in Chamberlin’s theory, attorneys in our model earn positive ex post rents in equilibrium.

3.1 A Special Case

We begin by assuming that contracts take the form \( \{w(x), w_0\} \), where \( w(x) \) is the attorney’s wage as a function of \( x \) if the case is won, and \( w_0 \) is the wage if the case is lost. In particular, we impose the restriction that if the attorney withdraws from the case at date 3, then she receives no compensation.\(^{15}\) This is consistent with typical contingent-fee arrangements in which the attorney may withdraw from a case at any time and forfeit her claim.\(^{16}\) In Section 3.3

\(^{15}\) We also do not allow the contract to depend upon announcements made by the attorney prior to the trial. However, more elaborate contracts are unnecessary because the restricted contract achieves the efficiency frontier.

\(^{16}\) This is the standard waiver to right of compensation given in 3 Am. Jur. Legal Forms 2d Attorneys at Law 30: 207 (1988). In general, the plaintiff is responsible for reimbursing the attorney for expenses and disbursements even when the case is dropped. These costs are included in \( k_i \).
we show that this assumption may be substantially relaxed without affecting our results. In particular, as long as the attorney’s wage if the case is dropped is constrained to be less than \( F + c_1 \), the costs incurred prior to learning \( p \) and \( x \), then the equilibrium contract will be positively sloped and linear.

The efficient decision rule at date 4 specifies that the plaintiff and attorney pursue the case if and only if their joint cost of proceeding is smaller than the expected benefit,\(^{17}\) or

\[
c_2 + k_2 \leq px. \quad (1)
\]

However, given a contract \( \{w(x), w_0\} \), the attorney will choose to proceed with the case when her expected personal costs are less than her expected wages, or

\[
c_2 \leq pw(x) + (1 - p)w_0. \quad (2)
\]

Comparing this expression with (1) reveals that, in general, the attorney’s personal objectives do not coincide with the joint objectives of the attorney and the client. Furthermore, since the client must rely upon the attorney’s advice, this tension could have serious efficiency consequences. However, we will show that economic pressures in the competitive market for legal services tend to align these goals.

Under our assumptions, the equilibrium contract offered by each attorney is the one that maximizes the representative plaintiff’s expected payoff subject to the constraint that the attorney’s expected wage is large enough to cover her operating costs, that is

\[
\max_{\{w(x), w_0\}} \int_x^1 \int_{p(x)}^1 \left[p(x - w(x)) - (1 - p)w_0 - k_2\right]f(x,p)dpdx \quad (3)
\]

such that

\[
\int_x^1 \int_{p(x)}^1 \left[pw(x) + (1 - p)w_0 - c_2\right]f(x,p)dpdx - c_1 \geq F \quad (4)
\]

where

\[
\beta(x) = \frac{c_2 - w_0}{w(x) - w_0}. \quad (5)
\]

Equation (5) is obtained from the attorney’s decision rule, equation (2).

The solution to this program, characterized in the following proposition, has several interesting features. First, the attorney’s wage is a linear function of the court’s award, \( x \). Second, the contract implements the most efficient

\(^{17} \) Note that this does not necessarily correspond to a social optimum, since the litigants do not generally bear the full cost of the court system.
decision rule, (1). Despite the asymmetry of information, the client has complete faith that the attorney will act in their joint interest. In other words, the equilibrium contract induces the attorney to make precisely the same decision that the plaintiff and the attorney would have agreed upon (with transfers, perhaps) if the plaintiff could also observe $p$ and $x$.\textsuperscript{18}

**Proposition 1.** The equilibrium wage contract, $\{w_0, w(x)\}$, is linear in the award, $x$; is privately efficient; and is given by

$$w(x) = w_0 + \left( \frac{c_2 - w_0}{c_2 + k_2} \right) x,$$

where

$$w_0 = c_2 + (F + c_1) \left[ \int_a^b \int_{p^*(x)}^1 \left( 1 - \frac{p}{p^*(x)} \right) f(x,p) dp dx \right]^{-1},$$

and

$$p^*(x) = \frac{c_2 + k_2}{x}.$$

**Proof.** First, note that the zero-profit constraint (4) binds. If not, then the optimand could be increased by reducing $w(x)$ over some range. We solve the program using the calculus of variations: Consider a family of wage functions parameterized by a scalar, $a$: $w(x) + ah(x)$, where $w(x)$ and $h(x)$ are continuous functions. If $w(x)$ is the solution to the program, it must be true that for every $h(x)$ the system achieves a maximum when $a = 0$.

Substituting $w(x) + ah(x)$ for $w(x)$ in the program above, and differentiating the associated Lagrangian with respect to $a$ and $w_0$ gives the following first-order conditions:

$$\int_a^b \left( \frac{(c_2 - w_0)h(x)}{[w(x) - w_0]^2} \left( \frac{x(c_2 - w_0)}{w(x) - w_0} - (c_2 + k_2) \right) f(x,\beta(x)) dx \right)$$

$$- (1 - \lambda) \int_a^b \int_{p(x)}^1 ph(x)f(x,p) dp dx = 0;$$

\textsuperscript{18}. This contract implements the efficient decision rule when the parties are symmetrically informed, too. However, under symmetric information other contracts would do this as well if we allowed for renegotiation. What is interesting about our contract is that it implements the optimal decision rule under asymmetric information, and renegotiation is unnecessary.
\[
\int_a^b \frac{(w(x) - c_2)h(x)}{(w(x) - w_0)^2} \left( \frac{x(c_2 - w_0)}{w(x) - w_0} - (c_2 + k_2) \right) f(x, \beta(x))dx
\]

\[-(1 - \lambda) \int_a^b \int_{p(x)}^1 (1 - p) f(x, p) dp dx = 0 \tag{10}\]

These, together with the zero-profit condition, characterize the solution to the program. In particular, when \(w(x)\) and \(w_0\) are given by (6) and (7) and \(\lambda = 1\), then all three conditions are satisfied. To see this, when \(\lambda = 1\), the second terms in (9) and (10) disappear, and (6) implies that the first terms are identically zero. Equation (7) specifies a value for \(w_0\) that makes the zero-profit condition hold with equality. Our assumption that \(c_2 + k_2 < \lambda\) implies that \(p^*(x) < 1\), so our technique is valid.

To verify uniqueness, notice that the decision rule in the competitive equilibrium, (8), corresponds to the jointly efficient rule, (1). This rule defines an upper bound on the joint payoffs. The contract we have found is the only one to achieve this: When the joint decision rule (1) and the attorney-client joint decision rule (2) coincide, the wage must have precisely the linear form in (6). Therefore the solution is unique.

From Proposition 1, we see that when \(F + c_1 = 0\), the equilibrium wage for the attorney is a flat fee, independent of the trial’s outcome: \(w_0 = w(x) = c_2\). However, when \(F + c_1 > 0\), the equilibrium wage schedule involves a contingent fee—the attorney is paid a higher rate when the case is won than when the case is lost, and receives a fixed percentage of the award. More generally, one can check that the slope of the wage function is increasing in \(F + c_1\) and the intercept, \(w_0\), is decreasing in \(F + c_1\).

These results may be understood intuitively. Suppose that the attorney is paid a fixed or hourly wage. When \(F + c_1 = 0\), the attorney is indifferent between dropping the case and proceeding at date 3, since her compensation is simply her cost of proceeding with the case, \(w(x) = w_0 = c_2\). Therefore she is willing to implement the jointly optimal decision rule in (1). When \(F + c_1 > 0\), the attorney’s expected wage is necessarily larger than \(c_2\), because the attorney must be compensated not only for her costs of proceeding with the case, but also for her sunk costs, \(F + c_1\). Clearly, under a fixed wage the attorney earns rents on every case that she pursues, and has no incentive to drop a case.

Now consider a contingent-fee contract. When the contract is upward sloping, the attorney’s rents from pursuing a case are larger when the merits of the case are stronger. Thus, in equilibrium the attorney has an incentive to drop weak cases (since they are associated with negative rents) and pursue strong

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19. Equation (7) establishes that \(w_0 = c_2\); (6) that \(w(x) = w_0\).
cases (those that are associated with positive rents). Hence a contingent fee is desirable since it provides the attorney with the incentive to be honest to her client.

An interesting feature of our model is that it is the only theory of attorney compensation that generates a linear wage contract. For example, although the presence of liquidity constraints implies that the lawyer should receive negligible compensation if the case is lost, there is no reason that the schedule should be linear in the award. Furthermore, risk sharing leads to a linear scheme only if the two parties have precisely the same attitudes toward risk. Under the assumption that the lawyer is risk neutral and that the plaintiff is risk averse, the risk-sharing theory predicts that the attorney should be the residual claimant, receiving 100 percent of the award. Finally, moral hazard models do not, in general, yield linear contracts; in fact, they may not even yield monotonic wage schedules (see Hart and Holmstrøm, 1987).

3.2 Discussion

Several of our assumptions merit further discussion. First, in the previous section we assumed that the attorney receives no compensation if she decides to drop the case. If the class of feasible contracts were not restricted in this way, then the first best could be achieved by many other contracts. For example, the lawyer could "buy" the case from her client with a promise to pay him an additional if the case is pursued. In this way, the externality is internalized and the attorney makes the jointly optimal decision as given in (1). Alternatively, the lawyer could simply charge the client for the initial stage of services, plus an additional if the case were pursued. Under this scenario, the lawyer is indifferent between pursuing the case and not, and is willing to implement the jointly optimal decision rule.

The assumption that the attorney's wage if the case is dropped, or the "drop wage" equals zero captured the notion that the provision of legal services involves certain overhead costs, and that these costs must be financed through ex post rents. In the next section we extend the model to allow for a more

20. As rises, the attorney must, on average, earn greater rents to cover the sunk costs. A steeper contingency payment is necessary to induce the efficient decision and, since the attorney earns zero profits, the intercept will be lower.

21. In fact, there are only a few other models that yield linear optimal contracts in the vast literature on contracts. Laffont and Tirole (1986) and McAfee and McMillan (1987) present models in which a risk-neutral agent who is privately informed about his ability chooses an unobservable action. They find that a linear contract can implement the second best outcome, although a host of other nonlinear contracts do as well. Holmstrøm and Milgrom (1987) consider a situation where the agent controls the drift of a Brownian motion, and show that when utility has an exponential form, the second best is uniquely implemented by a linear scheme. The application to contingent fees is mentioned in Milgrom and Roberts (1992).

22. By assuming that the attorney is not paid if she withdraws, we have implicitly ruled out lawyers specializing in advising clients for a fixed wage. Such diagnostic services would not tend to arise in equilibrium, however, since there would certainly be at least some degree of redundancy of the costs when two lawyers rather than one lawyer are involved in a case.

23. The assumption of monopolistic competition explains why the fixed costs, , are part of the ex post rents earned by the attorney. However, even if the firms had zero fixed costs and
general wage contract in which the drop wage is positive, $0 < w_d < F + c_1$, and show that our results go through: The equilibrium contract is still upward sloping and linear. Even under this weaker assumption, the attorney necessarily earns ex post rents and has positive expected profits in the equilibrium of the continuation game at date 4. In an earlier version of this article (Dana and Spier, 1992), we present two theoretical extensions of our model to justify the assumption that $w_d < F + c_1$. The first extension supposes that the attorney’s decision whether or not to learn $x$ and $p$ is unobservable. The second extension supposes that some lawyers (“quacks”) may be unable to learn $x$ and $p$. In each case, if $w_d \geq F + c_1$, then the plaintiff cannot be sure that his attorney is fully informed.

A second (implicit) assumption is that the plaintiff does not have the option to withdraw from the case at date 4. In one sense, this assumption is innocuous: The plaintiff would never strictly prefer to drop the case once the attorney expresses a willingness to continue, since the attorney’s action reveals that the case has a high expected return. On the other hand, a plaintiff who learns that his case is strong might leave (or threaten to leave) and negotiate a more favorable contract with another attorney. However, in the context of our model, the client’s ex ante expected return is greatest when he commits not to breach the original contract. Otherwise, his attorney’s incentives would be distorted. A damage clause that set the severance wage high enough would bond the plaintiff to the attorney, as would a clause stipulating that the attorney retains her contingent claim in the event of breach.

This theoretical prediction is consistent with actual contingent-fee arrangements, and with the court’s treatment of wrongful discharge under an incomplete contingent-fee contract. Many contingent-fee contracts include a clause specifying that when a client discharges a contingent-fee attorney and subsequently hires another lawyer, he must fully compensate the first attorney. Moreover, even when such clauses are not present, the law often allows the first attorney to retain a full contingent claim on the case. In reality, discharging a contingent-fee attorney may be prohibitively expensive for the plaintiff.

3.3 Generalizing the Wage Contract

In this section, rather than assume that the attorney receives no compensation if she withdraws from the case at date 4, we allow this value, $w_d$, to be a
parameter in the program. The following proposition establishes that there is, in fact, a continuum of linear equilibria, one associated with each value of $w_d$.

**Proposition 2.** For each value $w_d \leq F + c_1$, the equilibrium wage contract, \( \{w_0, w(x), w_d\} \), is linear in the award, $x$, is privately efficient; and is given by

\[
w(x) = w_0 + \left( \frac{c_2 + w_d - w_0}{c_2 + k_2} \right) x,
\]

where

\[
w_0 = c_2 + w_d + (F + c_1 - w_d) \left[ \int_0^F \int_0^1 \left( 1 - \frac{p}{p^*(x)} \right) f(x,p) dp dx \right]^{-1}
\]

and

\[
p^*(x) = \frac{c_2 + k_2}{x}.
\]

The proof of this proposition is analogous to the proof of Proposition 1, and is not presented.

At one extreme, when $w_d = F + c_1$, the equilibrium contract dictates that the attorney captures the fixed cost up front, and charges only for her time in the later stages of litigation: $w(x) = w_0 = w_d + c_2$. Under this scheme, the attorney is indifferent between dropping a case and continuing (regardless of the case’s merit), and is happy to implement the optimal decision rule. At the other extreme, $w_d = 0$ and the contract is precisely that given in Proposition 1. When $w_d$ is between these two values, the corresponding equilibrium contract is linear and upward sloping and, as before, implements the optimal decision rule.

### 3.4 The Volume of Litigation

Although the previous analysis clearly establishes that contingent fees serve to weed out frivolous (or low expected value) claims, thereby reducing the number of claims litigated, the overall effect on the volume of litigation is ambiguous. This is because in the absence of contingent fees, uninformed plaintiffs might not initiate lawsuits at all. If contingent fees were banned, as they are in Great Britain and parts of Canada, then a plaintiff could not rely upon his attorney for an accurate assessment of the case’s merit, and the decision to pursue a case would be largely independent of the individual case’s characteristics. This makes initiating a case less profitable for the
plaintiff relative to the profit he would earn when contingent fees are used and the option to drop is exercised efficiently.\textsuperscript{27}

In the following proposition, we assume that in a regulated market the attorney receives the “fair market value” of his time, taking fixed costs into account. More formally, \( w(x) = w_0 > c_2 \). Under this assumption, the attorney receives rents in excess of her marginal cost and strictly prefers to pursue all cases.\textsuperscript{28}

**Proposition 3.** If \( E(px) \geq F + c_1 + c_2 + k_1 + k_2 \), then the competitive equilibria characterized in Propositions 1 and 2 lead to less litigation than a regulated contract with \( w(x) = w_0 > c_2 \). If \( E(px) < F + c_1 + c_2 + k_1 + k_2 \), then the competitive equilibrium leads to more litigation than the regulated market.

**Proof.** From Proposition 1, we have that the client will bring the case at date 0 if and only if

\begin{equation}
\begin{aligned}
\text{Prob}(px \geq c_2 + k_2) & \quad E[px - c_2 - k_2 \mid px \geq c_2 + k_2] - F \\geq 0.
\end{aligned}
\end{equation}

(14)

If \( w(x) = w_0 > c_2 \), the attorney will never drop the case. Therefore, maintaining the zero-profit condition (so the attorney receives a fee of \( F + c_1 + c_2 \) per case), the client will bring the case at date 0 if and only if

\begin{equation}
\begin{aligned}
E(px) & - F - c_1 - c_2 - k_1 - k_2 \geq 0.
\end{aligned}
\end{equation}

(15)

Comparing (14) and (15) verifies that the payoff from bringing a case at date 0 is smaller in the regulated market. However, if the case is brought, then the likelihood that the case is pursued at date 4 is larger. \( \square \)

If the plaintiff’s attorney were compensated with a flat fee or hourly wage, then the case would be brought by the plaintiff at date 2 if and only if the plaintiff’s (ex ante) expected return exceeds the total cost. If the plaintiff’s priors are optimistic, then the case will be litigated regardless of the case’s true merit. Under this scenario, a contingent fee would reduce the likelihood of litigation. On the other hand, if the injured party is pessimistic, then under a flat-fee regime he would not bring the case at all; hence, switching to a contingent-fee arrangement would increase the volume of litigation.\textsuperscript{29}

\textsuperscript{27} We are abstracting from effects that the different arrangements have on ex ante negligent behavior, which would also impact the litigation rate.

\textsuperscript{28} Specifically, we are assuming that regulated contracts do not exhibit extreme front loading. If the plaintiff compensated the attorney with an up-front payment to cover fixed costs, then the first best could be achieved in a regulated market.

\textsuperscript{29} Miceli and Segerson (1991) argue that hourly fees lead to less litigation when the plaintiff is privately informed of the case’s value, although this result may be reversed when the ex ante incentive effects are taken into account.
The effect of contingent fees on social welfare is also ambiguous. While the threat of litigation provides a social benefit by deterring negligent behavior, it is also true that litigation imposes costs on society since the judicial system is supported through public funds (taxation). Without specifying the underlying negligent behavior and these social costs, we are limited in what we can say about the social value of contingent fees.

4. Fixed-Percentage Contracts

Although the equilibria characterized in Propositions 1 and 2 are all upward sloping and linear in the award, they do not typically feature a zero intercept; the attorney may either be compensated or penalized if the case is lost. Some law firms do, in fact, use such schemes: Bickel & Brewster, a Dallas-based firm, charges its clients a reduced fixed fee supplemented by a percentage of the award (*Business Week*, August 17, 1992: 105). Under the most common arrangement for personal injury cases, however, the client pays nothing if the case is lost.

The purpose of this section is to characterize equilibrium contingent-fee arrangements under the restriction that the attorney receives a flat percentage of the award. The attorney receives no payment if the case is dropped or lost. We must stress that such arrangements are suboptimal—the attorney will not, in general, adhere to the jointly optimal decision rule. Some cases may be pursued when they should be dropped, and others may be dropped when they should be pursued. Nevertheless, as illustrated by the example in Section 2, these contracts help to align the goals of the attorney and client and may be desirable under asymmetric information.

Let the equilibrium percentage be denoted by \( \alpha \), so the contract is given by \( w(x) = \alpha x \). The attorney will pursue the case whenever her expected earnings, \( apx \), exceed her cost of pursuing the case, \( c_2 \). The zero-profit condition dictates that \( \alpha \) satisfies the following equation:

\[
\int_{x_2}^{x_1} \int_{x_1}^{x_2} [apx - c_2]f(x,p)dpdx - c_1 = F.
\] (16)

The left-hand side represents the attorney’s expected profits minus her expected costs, and the right-hand side represents the fixed costs (measured on a per-client basis). Differentiating this expression shows that the equilibrium percentage, \( \alpha \), is increasing in the attorney’s costs \( (F, c_1, \text{ and } c_2) \). When the attorney incurs greater costs, her expected earnings must rise, too.

The value of \( \alpha \) defined by equation (16) will not generally equal the common one-third rate; instead it will be sensitive to the various parameters of the


31. We are implicitly assuming that the client’s payoff is decreasing in \( \alpha \), for otherwise a firm may be able to profitably deviate by offering a higher contingent fee. This perverse effect could conceivably arise if raising \( \alpha \) dramatically improves the attorney’s incentives.
model. (However, if the expected costs happened to be precisely one-third of the expected award, then a 33 percent rate would arise at the equilibrium contract.) However, empirical evidence suggests that there is a great deal more variation in the percentage than is commonly thought. One study found that although 33 percent was the most common rate, the range was from 25 percent to 50 percent. For sliding-scale fees, the range varied from 20 percent before trial to 50 percent through appeal. (See the discussion in Clermont and Currivan, 1978: 595).

5. The Defendant’s Attorney

As mentioned earlier, virtually all defense attorneys are paid by the hour. This fact is somewhat puzzling, since many of the commonly accepted explanations for contingent fees apply equally well to both the plaintiff and the defendant. For example, risk sharing through the use of a contingent contract ought to be observed whenever a litigant, plaintiff or defendant, is risk averse. Similarly, the basic incentive problems of moral hazard and adverse selection are faced by defendants as well as plaintiffs. In this section we discuss several alternative views of this paradoxical behavior, including one based informally on our theory.

First, a sharing rule for the defendant and his attorney is probably more difficult to standardize than a sharing rule for the plaintiff. Since the attorney must receive a positive payment on average, the defendant’s sharing rule cannot be stated as a simple fraction of the award. Instead, it might specify some large payment from the defendant to his attorney and require that the attorney share in the losses. (Equivalently, the attorney could receive a proportion of the “savings.”) Such schemes would necessarily be designed on a case-by-case basis, and would require a sophisticated assessment of the distribution of possible outcomes in court. On the other hand, primitive schemes in which the attorney is paid a fixed fee if the case is lost, and a larger fixed fee if the case is won, are not as difficult to design or implement.

A second possibility is that defendants are substantially less likely to face financial constraints. The reasoning is simple: A plaintiff could not benefit financially from taking legal action against a defendant with no wealth. It is interesting, although somewhat parenthetical, to note that a liquidity-

32. This view is consistent with many of the cases in which contingent fees for the defense attorney are observed. In the following two cases the court held that contingent arrangements for the defendant’s attorney were valid, and suggested that the clients were fully informed and that the contracts were equitable. The first, Cline v. Zappettini 131 Cal. App. 2d 723, 281 P.2d 35 (1st Dist. 1955), was a breach-of-contract suit involving a real estate broker’s fee. The defendant’s attorney received a proportion of the broker’s fee that was saved. The second example, Board of Education v. Thurman 121 Okla. 108, 247 P. 996 (1926), was a suit to recover taxes paid under protest. The contract specified that the attorney would receive a proportion of the tax savings. However, in certain tort claims the court has held that contingent fees for the defense attorney were unreasonable because they were not clearly tied to the actual value of the case. See Annotation (1981).

33. While this may be true, the liquidity-constraint story does not explain why contingent fees are often used by wealthy, non-liquidity-constrained plaintiffs in tort litigation.
constrained defendant may have a perverse incentive to pay his attorney more
the larger is the award, the opposite of the usual contingent-fee arrangement.
Suppose the defendant has some wealth, but is not wealthy enough to pay the
entire claim. In this case, the defendant may expect to be financially con-
strained ex post. A defendant who faces ex post financial constraints has an
incentive to pay his attorney only if he loses, since the payment to the attorney
may simply dilute the plaintiff’s claim. This stands in direct contrast to the
preferences of a financially unconstrained, risk-averse defendant.

Several other arguments are also based on generalizations about the types of
individuals who become plaintiffs and defendants. First, the defendant in tort
litigation is often represented by an insurance company. Insurance companies
are likely to be less risk averse than individuals, and to be better monitors of
the attorney’s effort. Similarly, the defendant is often a business enterprise. In
both of these examples, the defendant is likely to be risk neutral and his
attorney has a greater incentive to invest in her reputation since the defendant
is more likely to be a repeat purchaser.

Finally, our model suggests that defense attorneys do not use contingent
fees because of a fundamental difference in the roles that the two attorneys
play: Only the plaintiff’s attorney offers her client advice on whether to pursue
the case or drop it. The defendant does not have the option to simply withdraw
from the dispute.

We may be exaggerating this distinction, however. Since the defense attor-
ney surely plays an advisory role at the time of settlement, agency problems
may be severe. Under an hourly rate, the defense attorney may also have an
incentive to prevent the case from settling, while under a flat fee the attorney
might try to settle the dispute as quickly and effortlessly as possible. A
contingent fee, however, would give the defense attorney an incentive to
advise her client to accept a settlement offer only when the prospects of a trial
are sufficiently bleak. On the other hand, by the time serious negotiations
begin, it is likely that much of the initial uncertainty has already been re-
solved. Hence, this type of incentive problem may be more important for
the plaintiff in the early stages of litigation.

6. Conclusion

In our model, the contingent-fee system allows the plaintiff and his attorney to
make the privately efficient choice of cases to be litigated, the same choice
that they would make if the plaintiff were fully informed about the quality of
his case. A case will be brought against the defendant only when the expected
award or settlement is sufficiently large to justify the expenses of both the

34. This assumes that the courts allow defense attorneys to collect their fees before the plaintiff
is paid. While this is usually the case, contracts that pay the attorney more when the defendant is
bankrupt are unlikely to be enforced under existing bankruptcy law.

35. First, the defendant may infer a great deal from the plaintiff’s pursuit of the case. Second,
settlement offers are often made late in the legal proceedings, after the deposition of witnesses
and pretrial judgments, and after the attorneys have invested a large amount of their time and
effort.
plaintiff and his attorney. From a social perspective, however, the plaintiff’s decision may not be optimal. The court system is a costly public service, and these costs are not included in the plaintiff’s private decision. At the same time, there may exist social benefits of litigation. For example, the threat of legal recourse may alter individuals’ ex ante behavior and reduce the likelihood and severity of accidents.

We have also shown that the contingent-fee system discourages frivolous lawsuits. Some advocates of legal reform have argued that contingent fees give the plaintiff an incentive to pursue nuisance claims, since the plaintiff does not have to pay legal expenses if the case is lost. However, these arguments are generally fallacious because they ignore (or diminish the importance of) the attorney’s self-interest and expertise. Our model suggests that the contingent-fee system may arise as a mechanism for preventing weak cases from going to court. In contrast, under a flat-fee system weak cases may be brought more frequently by unscrupulous attorneys who seek to profit from their client’s ignorance.

Our work adds a new perspective to the analysis of contingent fees, and, while complementing prior explanations, helps to shed light on several empirical regularities. In particular, since our argument applies primarily to plaintiffs, it is consistent with the absence of contingent fees for defense attorneys. The argument is rooted in a fundamental asymmetry between plaintiffs and defendants and not on generalizations about the litigants’ wealth, reputations, or degrees of risk aversion. Second, our approach suggests that relatively less informed plaintiffs are more likely to use contingent fees. This is consistent with the fact that contingent fees are more frequently used in personal injury and medical malpractice cases.

Also, we offer some additional insight on the linearity of attorneys’ compensation schemes by considering a framework in which linear contracts are optimal. Our model does have it shortcomings, however. We do not explain the prevalence of the 33 percent contingent fee, nor do we explain why so many contingent-fee contacts specify that the client pays nothing if the case is lost. Our theory does suggest why the fee structure may vary with the type of lawsuit. For example, automobile accidents and medical malpractice rates might differ, and within these groups, rates for cases involving death might be different from other types of physical injury. These issues remain open questions for future theoretical and empirical research.

Finally, the nature of the incentive problem considered in this article is not unique to legal services; it is similar to the one faced by an author negotiating with a publisher who is better informed about the market for his book, or an entrepreneur negotiating with a financier who has greater expertise in the

36. We define a suit to be frivolous if it does not jointly benefit the plaintiff and the attorney to bring the case. A case with a very low expected value would fall into this category.

37. Nuisance suits may also arise if an attorney can establish a reputation for bringing and pursuing such suits. In this case, she may be able to extract settlements from defendants who are trying only to avoid court costs. However, this argument does not depend on the attorney being paid on a contingent basis.
entrepreneur's industry. In each of these cases, even if the individual could finance the project himself (or through a bank), he might prefer the informational advantage obtained by contracting with an expert. The expert is given the incentive to inform the individual accurately when she becomes a claimant on the project's returns. The financier shares in the returns through equity arrangements, and the publishing company through the royalty contract.

References


