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EXPERTISE AND CONTINGENT FEES: THE ROLE OF ASYMMETRIC INFORMATION IN ATTORNEY COMPENSATION

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Abstract

A contingent fee contract is the optimal compensation scheme for a plaintiff's attorney when the attorney is better informed about the likelihood of winning the case and the magnitude of the damages. The contingent fee gives the attorney (an expert) an incentive to accurately advise the client of his case's value and to make an efficient recommendation whether or not to pursue the case. Our model of attorney compensation generates a unique, linear contingent fee contract and explains several empirical regularities that are not accounted for by other theories, including the absence of contingent fees for defense attorneys.

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. The attorney receives a proportion, 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% of individuals and 86% of organizations who were plaintiffs in tort litigation paid their attorneys on a contingent fee basis[1]. 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 completely,[2] although Great Britain is currently considering relaxing these restrictions.

In this paper we show that if the attorney has more precise information concerning the merits of the case than does her client and the plaintiff is relying upon his attorney's estimate of the expected return from pursuing the case, then the optimal compensation scheme will give the attorney a fixed percentage of plaintiff's award. Concerns for reputation aside, if the attorney were paid either at a fixed rate or by the hour then she would have little economic incentive to reveal to her client that the case had a low expected return. Instead, she would lead the plaintiff blindly into litigation regardless of the case's merit. When the attorney is hired on a contingent fee basis, however, then she will only pursue cases that have a higher expected return. Our work contributes to the policy debate in two important ways. First, we present a new, strong efficiency argument in favor of contingent fees, and second, by explicitly examining the plaintiff's incentive to file suit, we offered a persuasive argument that the contingent fee system actually reduces the number of nuisance lawsuits.

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[1] See Kakalik and Pace (1986). Of the rest, the majority paid their attorneys an hourly rate. These statistics and much of the other empirical evidence cited in this paper is based upon the Civil Litigation Research Project (CLRP), a large-scale study conducted at the University of Wisconsin in the early 1980's. For a description of the project and its results see Trubek et. al. (1983). Some expenses, such as court costs or expert witness fees, may or may not be paid on a contingent basis (Fisher, 1988).

[2] See Pfennigstorf (1984).

Economists and legal scholars have offered several economic explanations for contingent fee compensation. First, contingent fees may be a mechanism for financing cases when the plaintiff is liquidity constrained and capital markets are imperfect[3]. Second, they may be used to achieve efficient risk sharing between the attorney and her client[4]. Third, contingent fee contracts 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 fee 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 Schwarz and Mitchell, 1970)[5]. Finally, as in our model, Scotchmer and Rubinfeld (1990) suggest that contingent fees arise from asymmetric information between the plaintiff and his attorney. They consider cases in which the attorney has better information about her own ability, and the plaintiff has better information about the merit of his case. Unlike our work, they do not consider the possibility that the attorney is better informed about the merits of the plaintiff's case.

Our work does not attempt to encompass the other explanations of contingent fees, nor to resolve the debate about which explanation of contingent fees is the most important. Our theory complements the other explanations, and is consistent with several empirical regularities that are not readily explained by alternative theories of contingent fees:

First, our model suggests an explanation for the absence of contingent fees for the defense attorney.[6] We demonstrate that the difference between the attorneys' compensation schemes 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. One alternative theory

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[3] See, for example, Rhein (1982) and Shrager (1985).

[4] See Posner (1986). 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) presents an analysis of the agency relationship and the incentive to settle the case.

[6] Kakalik and Pace (1986) find that in the CLRP data set 95% of defendants' attorneys were paid an hourly wage, and the rest were paid a flat fee. Contingent fees are rarely used by defendants, though notably exceptions exist (see American Law Reports 4th, 1981).

that is sometimes cited to explain the absence of contingent fees for defense attorneys is the liquidity constraint theory. The reasoning is that defendants are less likely to be liquidity constrained; if the defendant has no money, why would the plaintiff want to sue him? However, the liquidity constraint theory does not explain why contingent fees are used by wealthy, non-liquidity constrained plaintiffs. The risk sharing does not explain this result (even if defendants are usually less risk averse) because risk sharing ought to be observed in all of the cases in which the defendant is more risk averse than his attorney. Equally important, why do risk neutral plaintiffs use contingency fees? As we have already observed, 86% of organizations that are plaintiffs in tort litigation use contingent fees to compensate their attorneys. Since an organization is much less likely to be risk averse or financially constrained, these two theories cannot explain the high utilization rate. The moral hazard and adverse selection models are also unable to explain the use of flat fees by the defendant. Of course, some defendants may be better able to monitor their attorneys, and may have better information, but in many cases the basic incentive problems faced by plaintiffs will also be faced by defendants.

Second, our model is the only theory of attorney compensation that predicts a unique, linear wage contract[7]. Although the liquidity constraint theory implies that the lawyer should receive negligible compensation if the case is lost, there is no reason the schedule should be linear in the award. 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% of the award after paying an initial transfer to the plaintiff. Moral hazard models do not in general yield linear contracts, and may not even yield monotonic wage schedules (see Hart and Holmström, 1987).

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[7] Milgrom and Roberts (1991) suggest that linear fees are consistent with the results of Holmström and Milgrom's (1987) dynamic moral hazard model (described in text below).

Finally, our theory can help to explain why contingent fees are less prevalent in certain types of civil lawsuits, such as contract disputes brought by commercial or corporate plaintiffs[8]. Both our theory and the moral hazard model are consistent with the absence of contingent fees outside of personal injury and malpractice. Corporate clients are more likely to be effective monitors and repeat purchasers, increasing the indirect incentives for the attorney. However, the incentive problem we identify may be more important than the moral hazard problem, since the attorney's effort in preparing the case can be more easily monitored by the client than the accuracy of the attorney's assessment[9].

Our theoretical model is consistent with the empirical evidence reported by Farber and White (1991) in a paper on medical malpractice litigation. They found that a large percentage of medical malpractice lawsuits are dropped shortly after the discovery process. They conclude that hospitals typically have private information about their own negligence in malpractice cases, and that the plaintiff can only learn that information through discovery. Hence it is rational for plaintiffs to file lawsuits ex ante, in expectation that their cases will be pursued only if the expected returns are sufficiently high. This result implies that the plaintiff's attorney plays an extremely important role both in determining the merits of malpractice cases and in deciding whether or not to pursue them.

In the theoretical literature on incentives and contract theory, there are only a few other models that yield linear optimal contracts. Laffont and Tirole (1986) and McAfee and McMillan

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[8] 71% of the attorneys in the CLRP data set were paid contingency fees. Since 36% of the cases in the sample were tort cases, it follows that 58% of plaintiffs' attorneys in non-tort cases were paid a contingency fee. See Kakalik and Pace (1986) and Trubek et. al. (1983).

[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% of plaintiff's with a high control level paid contingency fees, compared to 60% of plaintiff's with a low degree of control (Trubek, et. al., 1983, II, 226). This is consistent with both the moral hazard model and our model.

(1987) present models in which a risk neutral agent who is privately informed about his ability chooses an unobservable action (in this way, these models combine elements of moral hazard and adverse selection). They find that a linear contract can implement the second best outcome, although a host of other nonlinear contracts do as well. Holmström 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 nature of the incentive problem considered in this paper 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 about the entrepreneur's industry. In each of these cases, even if the individual can finance the project himself (or through a bank), he may 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.

In the next section of the paper, we model this incentive problem and demonstrate that in a competitive equilibrium for legal services, compensation will be linear in the award. Section 3 of the paper considers alternative explanations for the absence of contingent fees for defense attorneys. The final section of the paper 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. The Model

In this section we present a simple model of the plaintiff-attorney relationship and the legal process. We suppose that attorneys offer their services in a competitive market, and that litigants choose lawyers based upon their advertised fee schedules. For simplicity, we assume that the lawyer's only role is to assess the value of the case and to advice her client whether to drop or pursue his case. This simple specification allows us to demonstrate that the lawyer's advisory role can be used to explain the optimality and uniqueness of a linear contingent fee contract. 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, but would unnecessarily complicate these results.

Each plaintiff has a case, which is characterized by a level of damages, x, and a probability of winning, p. These characteristics are assumed to be distributed according to the joint probability density function $f(x,p)$, where the support of x is the interval $[\underline{x}, \bar{x}]$ and the support of p is $[0,1]$. Although this distribution is commonly known to the plaintiffs and the attorneys, the precise realizations of x and p are not. The attorney is an expert and is able to perfectly ascertain the characteristics of the case, x and p, after an initial, possibly costly, consultation. The plaintiff, on the other hand, knows only the distribution of his claim and must rely upon the attorney to determine whether or not the case should be pursued further.

The timing of the contract game is given in Figure 1. First, attorneys announce contracts, in equilibrium the same contract, and then the plaintiff chooses the lawyer with the 'best' contract offer. In their most general form, contracts are of the form $\{w(x), w_0, w_d\}$, where $w(x)$ is the attorney's wage as a function of x if the case is won, w_0 is the wage if the case is lost, and w_d is the wage paid if the case is dropped without going to trial.

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Atts. Announce $\{w(x), w_0, w_d\}$	Plaintiff Chooses an Att.	Att. incurs c_0; Att. learns p and x	Att. advises plaintiff, and gets w_d if dropped	Go to trial: Att. pays c_A, P. pays c_P;	Court awards x w. prob. p, and Att. gets $w(x)$, 0 w. prob. $1-p$, and Att. gets w_0

FIGURE 1

The cost to the attorney of determining p and x is given by c_0. This cost may be interpreted as the cost of the attorney's time, including the costs of the discovery process, or, alternatively, as the fixed costs or the overhead costs of the firm measured per client that the attorney meets. After observing p and x, the attorney makes a recommendation to her client on how to proceed. The case will either be "dropped" or "pursued." If it is pursued then the attorney and plaintiff incur costs c_A and c_P respectively and receive the award, x, with probability p. If it is dropped, then no

further costs are incurred and no award is made, but the attorney is paid w_d. However, we will make the following important assumption:

Assumption: $w_d = 0$.

We will see that this assumption does not adversely effect the efficiency of the equilibrium contract and it can be substantially relaxed. In particular, as long as w_d is constrained to be less than c_0, then the equilibrium contract will be a linear incentive scheme.

There are several justifications for assuming that the attorney does not charge her client for dropped cases. First, if the costs represent overhead expenses, then it is reasonable to expect clients to absorb these costs only when the case is actually pursued. More importantly, if $w_d > 0$, then there is no guarantee that the client will get truthful advice from his attorney. For example, if the client cannot contract on whether or not his lawyer actually spends c_0 and learns p and x, then the attorney would have an incentive not to invest, and to walk away with a sure profit of w_d by pretending to learn p and x and then recommending that the case be dropped. Alternatively, there may be quacks masquerading as lawyers who would take the case and undertake the necessary investments, but would not learn p and x. If these quacks had a lower opportunity cost of time, then they could always reap a profit by charging c_0 and dropping every case. In a technical appendix we consider each of these extensions in greater depth.

We are also assuming that w_d cannot be negative, i.e., the attorney cannot buy the case form her client before learning p and x. This assumption seems perfectly reasonable, since otherwise individuals would have an adverse incentive to bring frivolous complaints to the attorney.

We now turn to the problem of deriving the competitive equilibrium contract. The contract offered by each attorney in equilibrium will maximize the plaintiff's expected payoff subject to two constraints. Formally, the optimization problem can be written as[10]:

$$\max_{\{w(x),\, w_0\}} \int_{\underline{x}}^{\bar{x}} \int_{\hat{p}(x)}^{1} [p\,(x - w(x)) - (1-p)\,w_0 - c_p] f(x, p)\, dp\, dx \tag{1}$$

$$s.t. \quad (IR) \int_{\underline{x}}^{\bar{x}} \int_{\hat{p}(x)}^{1} [p w(x) + (1-p)\,w_0 - c_A] f(x, p)\, dp\, dx \geq k \tag{2}$$

$$(IC)\ \hat{p}(x) = \frac{c_A - w_0}{w(x) - w_0}. \tag{3}$$

The first constraint, (2), is an individual rationality or zero profit constraint. The attorney earns a net profit large enough, on average, to cover her initial operating costs, k. The second constraint is an incentive compatibility constraint. Given an arbitrary wage contract $\{w(x), w_0\}$,

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[10] Alternatively, the optimization problem can be stated as a mechanism design problem. In this context, a contract specifies wage schedules, $\{w(x; \hat{x}, \hat{p}), w_0(\hat{x}, \hat{p}), w_d(\hat{x}, \hat{p})\}$, and the probability that the plaintiff will take the case to trial, $\pi(\hat{x}, \hat{p})$, as a function of the attorney's announcement of p and x. The contract is chosen to maximize the client's payoff subject to an individual rationality constraint and incentive compatibility constraints that induce the attorney to announce p and x truthfully.

Since x is observable ex post (with probability p) it is effectively contractible (the attorney can be easily punished for misreporting). However, given the available instruments, no sorting can take place on the announcement of $\hat{p}$. Thus, the contract can be rewritten, without loss of generality, as $\{w(x), w_0(x), \rho(x)\}$ assuming that $w_d = 0$. $\rho(x)$ represents the decision rule. If $\hat{p} \geq \rho(x)$ then the plaintiff goes to trial and if $\hat{p} < \rho(x)$ then the case is dropped.

The solution to this mechanism design problem is slightly more general than the problem stated in the text because it allows the wage paid when the case is lost to depend on x (or equivalently on the announced value of x). However, the optimization in the text is equivalent to the mechanism design problem under the additional assumption that $w_0(x) = w_0$. Relaxing this assumption would increase the set of optimal contracts, however the contract derived in the text would still be optimal. Of course, we do not think that this assumption is restrictive since such wage contracts are not observed empirically. A proof of the equivalence of the two optimizations is available from the authors on request.

the attorney will advise the client to pursue the case when her own private benefit from doing so exceeds her private cost:

$$p w(x) + (1-p)\, w_0 \geq c_A, \tag{4}$$

which is equivalent to (3) above.

From a private point of view, the most efficient decision rule (the 'first best') is to pursue the case if and only if the cost of doing so is smaller than the expected benefit. So, cases should proceed to court if and only if $c_A + c_P \leq px$, or

$$p \geq p^*(x) = \frac{c_A + c_P}{x}. \tag{5}$$

When $p = p^*(x)$, the attorney and client would be collectively indifferent between pursuing the case and dropping it. As the costs of pursuing the case increase p^* rises, reflecting the fact that only very promising cases should be litigated if the costs of litigating are large. As the level of damages, x, rises p^* falls, since cases with a larger potential payoff should be more readily pursued. Note that (5) does not necessarily correspond to the social optimum since the litigants do not necessarily bear the full cost of the court system.

It is easy to see that the first best decision rule, given in equation (5), is inconsistent with a constant wage for the attorney, i.e., $w(x) = w_0$ for all x. First of all, from equation (2) we see that a constant wage would have to be larger than c_A since the attorney must be compensated not only for her effort on the case but also for her overhead, k. Since these costs are sunk, the attorney must on average be earning rents on the cases that she pursues. When the wage is constant she is earning rents on *every* case that she pursues, and, from (3), she will pursue them all. A more efficient contract would specify a higher wage when the trial is successful, and induce the attorney to drop weaker cases.

The optimal contract is described in the following proposition:

Proposition: *The optimal wage contract is linear in the award, x, is privately efficient, and is given by*

$$w(x) = w_0 + \left(\frac{c_A - w_0}{c_p + c_A}\right)x, \tag{6}$$

where

$$w_0 = c_A + k\left\{\int_{\underline{x}}^{\bar{x}} \int_{p^*(x)}^{1} \left[1 - \frac{p}{p^*(x)}\right] f(x, p)\, dp\, dx\right\}^{-1} \leq c_A. \tag{7}$$

Proof:

The proof is by construction. We show that the most efficient contract can be implemented uniquely by a contract which satisfies the constraints.

An efficient contract, by definition, must implement the efficient decision rule. Setting $p^*(x)$ in equation (5) equal to $\hat{p}(x)$ in equation (3) yields (6) above. Therefore any fee schedule which implements the efficient decision rule must be linear in x.

Next we derive the value of w_0 which satisfies the constraints. Plugging the expression for $w(x)$ from (6) into the zero profit constraint, (2), yields the expression for w_0 given in the Proposition. Since $p \geq p^*(x)$ in the region of integration in (7) it follows that $w_0 \leq c_A$. From (6), this implies that the fee schedule $w(x)$ has a positive slope. Hence, the contract described in the Proposition is optimal.

Finally, any contract which solves the plaintiff's optimization must implement the efficient decision rule, hence it follows that the contract derived above is unique. Q.E.D.

The Proposition clearly shows that 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. This result can be understood intuitively. Although the attorney makes zero profits ex ante in the competitive equilibrium, she earns positive rents ex-post (after k is sunk). Therefore a positive slope is necessary to prevent the attorney from behaving opportunistically. Given x, when $p = p^*(x)$, the attorney is indifferent between pursuing the case and dropping it; the attorney earns no ex-post

rents on this "marginal case," since the expected wage exactly equals her cost of effort. For $p > p^*(x)$, however, the attorney earns rents. These ex-post rents are increasing in p since larger values of p represent higher probabilities of earning a high wage.

From equation (7) we see that when $k = 0$, the equilibrium wage for the attorney is a flat fee, independent of the trial's outcome: $w_0 = w(x) = c_A$. When $k = 0$, the attorney earns no ex post rents in the competitive equilibrium, and therefore the efficient outcome can be obtained by paying the attorney a constant wage, c_A. As k rises, however, the attorney is on average earning greater rents, and therefore must be receiving a steeper contingency payment in order to induce the efficient decision.

It is clear that our results do not rely in a substantive way on the assumption that there are no transfers for consultations because the first best is achieved (uniquely) even when the contract is restricted in this way. If the contract was not restricted, then the first best could be achieved through a larger variety of contracts. For example, the lawyer could "buy" the case from her client with a promise to pay him an additional c_P if the case is pursued regardless of the outcome. Alternatively, the lawyer could charge k for the consultation and an additional c_A if the case were pursued. Since the lawyer is always indifferent between pursuing the case and not, she will be willing to truthfully inform her client of his case's merit. Either scenario implements the first best.

Two related questions that we have not yet addressed are (1) why don't some lawyers specialize in advising prospective clients (i.e., diagnosing cases), and (2) why don't clients threaten to hire another lawyer at an hourly wage after their first attorney has reported that their case has a high expected value. First, clearly there are some costs, perhaps significant costs, to using two different lawyers. At the very least there would be a redundancy of the start-up costs, k. Second, in order for the client effectively use the diagnosis provided by one attorney in its contract with a second attorney, it would have to be verifiable. Of course, the client could hope for the two lawyers to compete with each other once they both learned p and x, however the two lawyers would have no incentive to participate ex ante if this were the case.

Although clients with strong cases have an incentive to leave (or threaten to leave) and hire another attorney at an hourly wage, there is no question that the client is better off committing ex ante not to leave. Suppose that the contract described above is generalized to allow a severance wage paid to the attorney in the event that the client decides to take his case elsewhere once p and x are reported. Then the optimal contract would set the severance wage high enough to assure that the client never had an incentive to leave. Otherwise, the client would leave (or renegotiate) whenever his case was strong, and the attorney's ex ante incentives would be distorted.

From a private standpoint, contingent fees increase efficiency and increase the welfare of the plaintiff (since only profitable cases are taken to court). If contingent fees were banned, as they are in Great Britain and parts of Canada, a case would be pursued by the plaintiff if and only if $E(px) \geq c_A + c_P + k$, since the competitive attorney's wage must equal $c_P + k$. Under a flat fee regime, the attorney's decision to pursue a case is independent of its characteristics, so our model suggests that allowing contingent fees would reduce the number of cases filed in equilibrium. Note that in our model, if $E(px) < c_A + c_P + k$, then under a flat fee regime no cases will be brought by plaintiffs. In this case, allowing the plaintiff to pay a contingent fee would increase the number of suits filed. In the context of our model there are two countervailing effects of contingent fees on the level of litigation.

Corollary: *If* $E(px) \geq c_A + c_P + k$ *then contingent fees lead to less litigation than flat fees, and if* $E(px) < c_A + c_P + k$ *then contingent fees lead to more litigation than flat fees.*

From the viewpoint of maximizing social welfare, the effect of contingent fees is less clear. Lawsuits act as a deterrent to negligent behavior, and so lawsuits provide social benefits, but also, court cases impose costs on society through the support of the judicial system. Without specifying the underlying negligent behavior and the social cost, we are limited in what we can say about the social value of contingent fees.

3. The Defense Attorney

The absence of contingent fees for defense attorneys is explained in our model as deriving from the difference in the roles that the two attorneys play: only the plaintiff's attorney offers her client advice on whether or not to pursue the case. In this section we consider the defendant's situation in more depth. Several alternative views of the asymmetry between plaintiff and defendant compensation schemes are offered. We also consider the possibility that we are exaggerating this distinction, since the defendant's attorney will necessarily be advising her client on other matters, such as whether or not to make or accept a settlement offer.

First, defendants may not be as likely to not face ex ante financial constraints. It is reasonable to suppose that defendants who are being sued have some wealth, since otherwise plaintiffs could not benefit from taking legal action against them. However, many defendants may still be liquidity constrained if, for example, if their wealth is tied up in property, capital, or human capital. So differences in the extent to which plaintiffs and defendant face ex ante financial constraints is not a compelling reason for the absence of contingent fees for defense attorneys. Second, if the defendant has wealth, but is not wealthy enough to pay the entire claim, then the defendant may expect to be financially constrained ex post. This may give the defendant an incentive to use a payment scheme that pays his attorney more when the award is the larger, the opposite of the usual contingent fee arrangement. A defendant who faces ex post financial constraints has an incentive to pay his attorney *only* if he loses, since the payment will effectively be made by the plaintiff rather than by himself[11]. The financially constrained defendant's preference for such perverse incentive contracts may explain the use of flat or hourly fees for defense attorneys. This stands in direct contrast to the preferences of a financially unconstrained, risk averse defendant.

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

A third important distinction between the defendant and the plaintiff is that sharing rules for the defendant and his attorney (where the defendant's returns are losses) are more difficult to standardize than sharing rules for the plaintiff and his attorney (where the plaintiffs' returns are gains). Since the attorney must receive a positive payment on average, the defendant's sharing rule cannot be stated as a fraction of the award. Instead sharing rules for defense attorneys would generally have to specify some large payment from the defendant to his attorney and require that the attorney share in the losses. This contract could not be standardized in the industry. Consequently, defendants would have to negotiate contingent fees with their attorneys on a case by case basis, which would require ex ante a complicated assessment of the distribution of possible outcomes in court. While this might discourage some defendants from signing a contingent fee contracts, it seems unlikely to explain the overwhelming absence of such schemes. After all, a primitive scheme in which the attorney is paid a fixed fee if the case is lost and a larger fixed fee if the case is won is not difficult to implement.

Other issues are also likely to affect the defendant's choice of payment. For example, if the defendant is insured while the plaintiff is not, then the defendant is less likely to use a contingent fee. The insurance company representing the defendant is likely to pay for the legal services and consequently the fees are more likely to be flat or hourly fees. Also, to the extent that defendants are more likely to be business enterprises, many of the popular reasons for contingent fees become less important. Insurance companies and corporate clients are often less risk averse and are better monitors of effort. Furthermore, with such clients the attorney has more incentive to invest in her reputation. These issues are important, but they do not derive from any particular asymmetry inherent to being a defendant or plaintiff. Instead, they are arguments based on generalizations about the types of individuals who become plaintiffs and defendants.

Finally, we must consider the possibility that the defense attorney plays an advisory role at the time of settlement. If the defense attorney has better information about the defendant's case than the defendant, then the attorney has an incentive under a flat payment scheme to advise the defendant to settle early (as would the plaintiff's attorney). A contingent fee would give the

defense attorney an incentive to advise her client to accept a particular settlement offer only when the case is strong, i.e. when px is large. However, at the settlement stage it is likely that much of the initial uncertainty has already been resolved. First, since the plaintiff's decision to pursue a case is influenced by the expected value of the case, px, the defendant can infer a great deal from the plaintiff's pursuit. Second, settlement offers are often made late in the legal proceedings, after the deposition of witnesses and pre-trial judgments, and after the attorneys have invested a large amount of their time and effort. The plaintiff and the defendant are both likely to be substantially better informed by the time that settlement offers are made and thus the effect on the incentive scheme is much weaker than the one previously analyzed.

4. Conclusion

In our model, the contingent fee system allows the plaintiff and his attorney to make the privately efficient decision concerning the type of cases that are litigated, the same decision that they would make if the plaintiff were fully informed about the quality of his case. Since pursuing the case is costly for both the attorney and the plaintiff, a case will be brought against the defendant only when the expected size of the award or settlement is sufficiently large to justify the expense. From a social perspective, however, the decision of the plaintiff 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 action may alter individuals' ex ante behavior and reduce the damage done to plaintiffs.

We have also shown that the contingent fee system does not encourage nuisance suits (e.g., suits which would not benefit the plaintiff if they actually proceeded to trial). Although some advocates of legal reform have argued that contingent fees give the plaintiff an incentive to bring frivolous lawsuits, since he does not have to pay full amount of his legal costs unless the case is won, these arguments are generally fallacious because they ignore or diminish the attorney's self interest and expertise. Nuisance suits are generally defined to be We show that the contingent fee system can arise as a mechanism for preventing weak cases from going to court. In

contrast, one can imagine that weak cases are more likely to be brought by attorneys under a flat fee system because they can profit from their client's ignorance[12].

Our work adds a new perspective to the analysis of contingent fees, and, while complementing prior explanations, helps to explain several puzzling stylized facts. In particular it provides an explanation for 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 risk aversion. Second, our approach implies that relatively less informed plaintiffs are more likely to use contingent fees, which, in conjunction with the standard moral hazard model, may explain why contingent fees are frequently used in personal injury and medical malpractice cases. Finally, we offer some additional insight on the linearity of attorneys' compensation schemes by deriving a new information framework in which linear contracts are optimal.

Our model does not, however, explain the prevalence of the 1/3 fee, nor does it explain why most contingent fee contacts specify $w_0 = 0$, that is, the client pays nothing if the case is lost. Empirical evidence suggests that there is a great deal more variation in the percentage than is commonly thought. One study by Deitz, et. al. (1973) found that although 1/3 was the most common rate, the range of contingent fees was from 25% to 50%. For sliding scale fees, the range was from 20% before trial to 50% through appeal. Our theory would be consistent with fees that varied by 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 physical injury cases. These issues remain open questions for future theoretical and empirical research.

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[12] 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 contingency basis.

Technical Appendix

In this appendix we consider two extensions of the model. In each case we relax the assumption that $w_d = 0$. We continue to assume, however, that $w_d \geq 0$. That is, the attorney cannot pay her client.

Case 1: Moral Hazard

First, we consider the case in which the attorney's decision whether or not to learn x and p is not observable. Hence a moral hazard problem results, and a new incentive constraint must be imposed, (A4). The resulting optimization is:

$$\max_{\{w(x),\, w_0,\, w_d\}} \int_{\underline{x}}^{\overline{x}} \int_{\hat{p}(x)}^{1} [p\,(x - w(x)) - (1-p)\,w_0 - c_p] f(x, p)\, dp\, dx \qquad \text{(A1)}$$
$$- \int_{\underline{x}}^{\overline{x}} \int_{0}^{\hat{p}(x)} w_d(x, p) f(x, p)\, dp\, dx$$

$$\text{s. t.} \quad \int_{\underline{x}}^{\overline{x}} \int_{\hat{p}(x)}^{1} [p w(x) + (1-p)\,w_0 - c_A] f(x, p)\, dp\, dx \qquad \text{(A2)}$$
$$+ \int_{\underline{x}}^{\overline{x}} \int_{0}^{\hat{p}(x)} w_d(x, p) f(x, p)\, dp\, dx - k \geq 0$$

$$\hat{p}(x) = \frac{c_A + w_d - w_0}{w(x) - w_0}. \qquad \text{(A3)}$$

$$\int_{\underline{x}}^{\overline{x}} \int_{\hat{p}(x)}^{1} [p w(x) + (1-p)\,w_0 - c_A] f(x, p)\, dp\, dx \qquad \text{(A4)}$$
$$+ \int_{\underline{x}}^{\overline{x}} \int_{0}^{\hat{p}(x)} w_d(x, p) f(x, p)\, dp\, dx - e \geq w_d$$

$$w_d \geq 0 \qquad \text{(A5)}$$

$$w_0 < c_A \qquad \text{(A6)}$$

where e is the effort cost of learning x and p. The difference, $k - e$ is the attorney's rent, or alternatively, is the contractible portion of the initial consultation costs. Note that we are implicitly assuming that if the attorney does not learn p and x, then she always drops the case. In other words, the attorney cannot take the case to trial (or alternatively cannot win the case) unless she has first made the investment e. The final constraint, (A6), specifies that the attorney would not want to go to trial if she knew she would always lose. Of course, this constraint will not be binding at the optimum.

It is clear, by comparing (A2) and (A4), that the optimal contract will specify a drop wage, w_d, less than $k - e$. All else equal, if w_d were greater than $k - e$, then the attorney would have an incentive to drop all of the cases and never learn x and p. So, if $k = e$, then the unique optimal contract will specify $w_d = 0$, the optimization above yields exactly the same contract as is specified in the main text. If $k > e$, then a range of optimal linear contracts exists. In this case, the optimal contract is the same as in the text, but k should be replaced everywhere by $k - w_d$, where $w_d \in (0, k-e)$.

Case 2: Adverse Selection

Second, we consider the case in which there are good attorney's and quacks. Quacks are unable to learn x and p, and are unable to win in court. While it costs good attorney's k to learn the value of the case, quacks can mimic good attorney's activities at a cost $k' < k$. For example, if good attorneys must attend law school and invest in human capital, then k represents the rental value of their human capital. Quacks, who do not make the same human capital investment, will enter the market as long as they can earn a rent of at least k'.

An adverse selection problem results, and a new separation constraint is imposed, (A10). In this respect, this generalization of our model is similar to the model of Rubinfeld and Scotchmer (1990). The resulting optimization is:

$$\max_{\{w(x),\, w_0,\, w_d\}} \int_{\underline{x}}^{\bar{x}} \int_{\hat{p}(x)}^{1} [p\,(x - w(x)) - (1-p)\,w_0 - c_p]\, f(x,p)\, dp\, dx \qquad \text{(A7)}$$

$$- \int_{\underline{x}}^{\bar{x}} \int_{0}^{\hat{p}(x)} w_d(x,p)\, dp\, dx$$

$$\text{s. t.} \quad \int_{\underline{x}}^{\bar{x}} \int_{\hat{p}(x)}^{1} [p\,w(x) + (1-p)\,w_0 - c_A]\, f(x,p)\, dp\, dx \qquad \text{(A8)}$$

$$+ \int_{\underline{x}}^{\bar{x}} \int_{0}^{\hat{p}(x)} w_d(x,p) f(x,p)\, dp\, dx - k \geq 0$$

$$\hat{p}(x) = \frac{c_A + w_d - w_0}{w(x) - w_0}. \qquad \text{(A9)}$$

$$w_d - k' \leq 0 \qquad \text{(A10)}$$

$$w_d \geq 0 \qquad \text{(A11)}$$

$$w_0 < c_A \qquad \text{(A12)}$$

The optimal contract will specify a drop wage which is less than or equal to k', and greater or equal to zero. Otherwise the quacks will have an incentive to enter the market, accept cases at the competitive wage, and drop all of their cases. The final constraint, (A12), specifies that w_0 must be less than c_A in order to insure that a quack will not pursue all cases, however this constraint will never bind at the optimum. The optimal contract will be the same as the contract specified in the main text when $w_d = 0$, however, there are other possible optimal contracts. If w_d is chosen such that $k' > w_d > 0$, then the optimal contract will be the same as the contract described in the text, except that k should be replaced $k - w_d$, and $w_d \in (0,k')$.

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