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Litigation and Legal Evolution: Does Procedure Matter? (Gordon Tullock’s Case Against the Common Law – Revisited)

Abstract: Gordon Tullock’s critique of the Common law runs against much of the conventional wisdom in the law and economics literature. In this paper we revisit one of the most controversial aspects of Tullock’s critique. By applying Tullock’s own model of rent-seeking to litigation, we study the effect of alternative procedural rules on civil litigation. Our results provide support for Tullock’s controversial critique of the Common law, revealing an evolutionary bias in the production of legal rules by courts. We extend the standard litigation model to study the effects of alternative procedural systems on the evolution of the Common law.

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JEL Codes: B31, D72, K10, K12, K13, K41

In the early years of the law and economics movement, Gordon Tullock emerged as a dissenting voice against the otherwise unanimous choir of legal economists affirming the efficiency of the common law hypothesis.³ According to the efficiency hypothesis, the common law process enjoyed a comparative advantage over legislation (i.e., laws made by legislatures) in the creation of efficient law. The common law was able to generate efficient law because the common law process of adjudication and the rule of precedent created an evolutionary selection of common law rules. Tullock’s case against the efficiency of the common law stood against an important pillar of the rising law and

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³ The efficiency hypothesis of Common Law first introduced by Coase (1960) has been systematized and extended by Erlich and Posner (1974), Rubin (1977), Priest (1977), and Posner (1994), among others. Tullock (1980, 1997, 2005a, 2005b, 2005c) has been a strong opposing voice, pointing out the pervasive shortcomings of the Common law process in the formation of legal rules.

economics movement, while at the same time going against much of the wisdom of the public choice literature. Tullock's critique of the common law has been controversial and often misinterpreted in the literature, although Tullock's wisdom has ultimately been acknowledged even by some of his most critical opponents.

Tullock's case against the common law hinges upon two specific features of the common law process: the adversary system and the common law process of rulemaking. Although Gordon Tullock remained a solitary voice in his first critique of common law (i.e., the adversary process) in the early years of the law and economics movement, Tullock's view has gained acceptance in the literature and recent results in the law and economics literature have corroborated Tullock's wisdom on that point. Tullock's second critique of the common law (i.e., the common law as a rulemaking process), however, remains quite controversial.⁴

In this article, we provide a basic extension of Tullock's (1967 and 1980) own model to formalize Tullock's second critique of the Common law. Building on Tullock's argument, we focus on the effects of procedure in two Common law systems: "It is particularly instructive to compare litigation in the United States with that in England and Wales since both countries operate under the Common law system" (Tullock, [1997], 2005c, p. 441). Tullock explains that the comparison between the American and English systems is particularly instructive because, even though these systems share a common tradition with respect to substantive law, the American and English systems have developed quite different procedural regimes. The most crucial difference to which Tullock

⁴ Tullock analogizes litigation under the adversary system to the actions of interest groups engaging in rent-seeking activity to secure favorable legislation. "There is a significant element of rent-seeking in the adversarial legal system. Trial lawyers can be viewed from the same perspective as special interest lobbyists. In both cases, government is involved as a vehicle of wealth redistribution. The basic difference between the two is that legal proceedings are subject to more stringent procedural rules. Such rules may serve to increase rather to ameliorate the social waste from rent-seeking and rent-protection." (Tullock, [1997], 2005c, p. 422-423). According to Tullock, therefore, the behavior of competing litigants in the adversary system can essentially be analogized to the one of rent-seeking parties investing for a redistributive judicial decision. For a recent review, see Zywicki (2008). For a model of rent-seeking under litigation, with a comparison of the levels of dissipation under the adversarial and inquisitorial regimes, see Parisi (2002).

brings our attention concerns the rules applied for the recovery of litigation costs: “In England and Wales, the loser of a lawsuit must pay the litigation costs of the winner, whereas in the United States each party ordinarily pays his own litigation costs. Given risk aversion, this reduces the volume of litigation. In England and Wales, contingency fees are prohibited. This reduces the incentives for lawyers to ambulance-chase and to pressure reluctant parties into litigating for damages that truly have not been sustained, behavior that has become a pronounced feature of American trial lawyers since the 1960’s” (Tullock, [1997], 2005c, p. 442).

In what follows, we provide a formalization of Tullock's argument, comparing the litigation incentives and participation choices of prospective litigants under the “American rule” and “English rule”.⁵ This article is structured as follows. After tracing a brief intellectual history of the efficiency of the common law hypothesis, in Section 1, we use Tullock’s model to compare the American and English rules, looking at the effect of these two alternative procedural regimes on the parties litigation incentives. In Section 2, we extend the analysis to investigate the optimal structure of attorney’s fees under an English rule. We will show that, in order to mitigate the dissipation induced by the loser-pays rule, courts should liquidate attorneys’ fees in favor of the winning party either as a lump-sum fee or as a percentage of the value of the case, rather than on the basis of actual effort and expenditures. In Section 3, we look at the effect of the American and English rules on the parties’ choice to engage in litigation. In Section 4, we consider the implications of the previous results for the efficiency of the common law hypothesis. In addition to supporting Tullock’s critique, our results suggest that the choice of procedural regimes has an impact on the evolution of substantive law under the Common law. Section 5 concludes with some ideas for future research.

⁵ In the interest of brevity, in the following we shall refer to the “American rule” as the regime under which each party is responsible to pay his litigation costs, and to the “English rule” as the regime that applies the loser-pays principle, where the losing party pays (at least some) of the legal expenses of his winning counterpart. It is interesting to note that the English loser-pays rule is also adopted by most of the Civil law systems, including French, Italian and German law.

1. Gordon Tullock's Critique of the Common Law

Gordon Tullock raises two fundamental critiques against the common law. The first of Tullock's critique of the Common law concerns the use of the adversary system. On more than one occasion, Tullock suggested that litigation under an adversary system is affected by the same rent-seeking problems that plague the legislative process. In Tullock's view, error costs will be higher under the adversary system than under an inquisitorial system. As Tullock ([1997], 2005c, p. 422) puts it, "[the adversary system] places little or no value on searching for the truth. It is a combat system in which winning is the sole objective."⁶ Tullock (2005c) points out that increasing marginal expenditure on administrative costs in the context of the adversary system is likely to decrease the accuracy of the system, instead of increasing its accuracy. Tullock argues that the adversary system is less accurate overall and more expensive than the inquisitorial model. In contrast, in the inquisitorial system, judges, rather than the parties, perform the majority of work, and the work of judges is directed towards the search of truth, thereby reducing the space for rent-seeking activities of parties. Judges internalize the social costs and may invest in additional costs only if the expected net benefits are positive, rather than being driven by the rent-seeking motivations of the parties.

The second critique that Tullock makes against the common law concerns its process of formation and evolution of judge-made rules. Tullock claims that the decentralized process of the common law system is more prone to socially suboptimal outcomes - at least as the common law system operates today.⁷ In Tullock's view, the

⁶ Tullock previously formulated this point as a conjecture: "I should explain that I believe that European courts are less prone to error than American courts, but it is more a matter of feeling that their procedure is more likely to reach the truth than a decision based on actual statistical knowledge" (Tullock, 2004, p.)

⁷ Tullock (2005c) agrees that Common law has led to the creation of efficient rules during the eighteenth century (in line with Rubin 1977, Priest, 1977). However Tullock ([1997], 2005c, p. 410) claims that in the last century "The ideal of the Common law [...] is the development of law by means of judicial precedents, the use of the jury to determine the material facts of a case, and the definition of numerous causes of action. [...] These ideals have been eroded and disfigured by the

process of law making in a common law system can be viewed as a rent-seeking process.

Tullock further criticizes the evolution of judicial precedent, which was central to the efficiency of common law. Tullock ([1997], 2005c, p. 401) observes that “Central to the social functions and the foundational principles of the Common law system is the concept of doctrinal stability as encapsulated in the institutional principle of stare decisis. Under that principle, the ratio decidendi, holding, or rule of a precedent is binding upon subsequent cases, within broad limits, if the precedent satisfies certain formal conditions, such as having been rendered by a court of a relevant level in a relevant jurisdiction. ... the erosion of the role of precedent and of the application of stare decisis by the U.S. courts during the second half of the twentieth century has severely eroded, if not entirely destroyed, the support and legitimacy of the Common law”.⁸

In a recent article, Zywicki (2008) assessed the merits and academic acceptance of Tullock’s two critiques of the common law, suggesting that Tullock’s critique of the adversary (as opposed to inquisitorial) system appears to be stronger on both theoretical and empirical grounds than his critique of the Common law (as opposed to Civil law) system of rulemaking. Zywicki’s view reflects the remaining uneasiness of academia with Tullock’s second critique of the common law. In the following, we extend Tullock’s own rent-seeking models providing a formalization of his second critique of the Common law.

U.S. judicial system during the second half of the twentieth century, not least because the erosion of the U.S. constitutional republic by the forces of democratic majoritarianism has exposed law and justice to the pressures of the political marketplace.” Tullock claims that the production of law in U.S. Common law system can be viewed as part of the “political marketplace, from the perspective of interest group approach to politics.” (Tullock, [1997], 2005c, p. 411). He further argues that “responsiveness to the wider arena has significantly deteriorated in the U.S. Common law system, not least because of the increasing politicization of the bench and the widening role of the non-specialist jury during the second half of the twentieth century” (Tullock, [1997], 2005c, p. 401).

⁸ Tullock argues that “the retreat from stare decisis in the U.S. Common law system is a predictable consequence of the institutional characteristics of the U.S. legal system and this retreat is now sufficiently extensive as to challenge the validity of the Common law system.” (Tullock, [1997], 2005c, p. 402).

1.1 The Incentives to Litigate: Comparing Procedural Rules

Gordon Tullock's (1967 and 1980) seminal rent-seeking models have a number of important and underexplored implications for litigation theory. Tullock provides a basic model of how self-interested parties incur costs in the unproductive competition over a fixed rent. Similar to a rent-seeking scenario, in most litigation settings, litigants compete for the appropriation of a fixed resource. Tullock provides a valuable key for the understanding of the incentives of litigants. Applying Tullock's rent-seeking model, we can expose the incentives of parties who engage in litigation. These incentives may be either to increase the probability of receiving the contested entitlement or to increase the share received of the contested legal entitlement. A probabilistic model exposes the former incentive and a deterministic model exposes the latter. Tullock's basic model and the extensive literature that followed allows us to study the equilibrium investment of each litigant, and how litigation expenditures vary with the value of the case, the number of litigants and the procedural rules.⁹

In most civil litigation settings, litigants expend resources to appropriate the value of a case. The value of the contested case is generally fixed and is not affected, positively or negatively, by the parties' expenditures. Consider, for example, the litigation involving two siblings fighting over the estate of their deceased father. Although litigation may dissipate some of the value of the case, the value of the estate is generally given and is independent of the parties' litigation choices. Likewise, in case of a tort accident, victim and tortfeasor litigate to shift and obtain compensation for the losses sustained due to the accident. In this case, we can also think of the value of the case as determined by the past

⁹ Early applications and extensions of Tullock's insight led to differing views on the equilibrium levels of rent dissipation. Posner (1975) considered a probabilistic rent-seeking game with risk-neutral players where the probability of winning is proportional to investment, and the available rents are fully dissipated in equilibrium. Posner's full dissipation hypothesis became popular in the empirical literature and also had a strong appeal in the theoretical literature. Tullock (1980) identified conditions under which competitive rent-seeking could lead to under- or over-dissipation.

accident loss and not being affected by the parties' litigation choices. This allows us to model the parties' litigation choices as rent-seeking expenditures.

Litigants can increase their probability of winning the case by undertaking higher litigation efforts. As with Tullock's (1967) set up, the probability of winning a case is affected by the relative effort expended by a litigant relative to the other. Consider, for example, the litigation involving two siblings for the inheritance of the estate of their deceased father. Imagine that the deceased father left a will saying "I leave all my estate to my favorite son," forgetting to specify the name of his favorite son. Imagine that the outcome of this case hinges upon the amount of evidence presented by the parties. The parties' effort in this case may be interpreted as the parties' investments in discovery (e.g., number of witnesses or pieces of evidence that each litigant brings to court to support his claim). The larger a litigant's investment in discovery and litigation, the larger the probability that the court (or jury) will be persuaded by the evidence and the larger the probability that he will inherit the estate.

Analytically, let e_1 and e_2 represent the litigation effort respectively of the plaintiff and prospective defendant and $p(e_1, e_2)$ the probability of winning the case for the plaintiff. Note that the complement to one, $1 - p(e_1, e_2)$ denotes the probability that the case will be decided in favor of the defendant. We assume, as is natural, that courts are required to decide a case in favor of one or the other party, such that the sum of the parties' probabilities of success adds up to one. We can use Tullock's explicit functional form to denote the parties' respective probabilities of success. According to Tullock's rent-seeking model, the probability of winning the case, say for example for the plaintiff, equals the ratio of plaintiff's effort to the total effort spent by both parties to win the case. Analytically, the probability of winning litigation for the plaintiff therefore can be written in the familiar form:

$$p(e_1, e_2) = \frac{e_1}{e_1 + e_2}$$

$$1 - p(e_1, e_2) = \frac{e_2}{e_1 + e_2}$$

In the context of litigation, these probability functions can be interpreted as the parties' return functions from litigation efforts. Given these return functions, the rent-seeking model allows us to establish the parties' rational expenditures in litigation. In the interest of generality, let's consider a slightly more complex case where the defendant could bring a counterclaim against his plaintiff. Imagine, for example, the litigation of two car drivers that were involved in a car accident, where driver 1 suffered a loss, W , and driver 2 suffered a loss, L . Assume that the police report indicates that one of the two drivers must have run through a red light for such an accident to occur, but each driver claims that his light was green and blames the other for the violation. Imagine that the outcome of this case hinges upon the amount of evidence presented by the parties. The court will decide in favor of the party who provides the more persuasive evidence about the liability of the other. Tullock's return function allows us to determine how much each party should rationally spend in litigation to win the case. Denote the value of the case as W and the value of the possible counterclaim as L .

Let us begin our analysis assuming that the stakes are symmetric, i.e., the drivers suffered an equal loss.¹⁰ In our car accident example, the plaintiff would recover W if the court finds the defendant liable. This outcome happens with probability $p(e_1, e_2)$. In the opposite case the plaintiff will not recover for his loss and will actually become liable for the other party's loss, L . The probability that this outcome occurs is $1 - p(e_1, e_2)$.

The functional form of the probability function captures Tullock's idea (2005a) that

¹⁰ We consider the case of asymmetric stakes as an extension of the model presented in this section.

any amount of money the parties invest in litigation expenses will have two effects simultaneously: it will increase the spending party's own chance of winning the case and reduce chance of the other. Tullock claims that "The benefit to my case and the injury to the other case are identical. In other words, there is an externality falling on my opponent of exactly the same size as the benefit I receive" (Tullock, [1980], 2005b, p. 354). Tullock points out that the externality is exacerbated under the American rule for legal fees with respect to the English rule. Tullock ([1997], 2005c, p. 441) argues that "Americans are much more litigious than other peoples". This may be explained by the fact that under the American rule (as clearly pointed out by Tullock) the ability of each party to externalize costs on the other party raises the total cost of litigation.¹¹

1.2 *Litigation under an American Rule*

Given this litigation problem, we can characterize the parties' optimal strategies under two alternative procedural systems: the American rule, under which each party is responsible for paying his own litigation costs, and the English rule, under which the losing party pays for some of the legal expenses of his opponent.

Under the American rule, parties are generally responsible for their own attorney's fees unless otherwise agreed upon. In the case of symmetric stakes, the expected returns from litigation for party 1 and 2 can be respectively written as:

$$R_{1,American}^e = p(e_1, e_2)W - (1 - p(e_1, e_2))L - e_1$$

¹¹ Litigation costs are externalized by both parties of the litigation, if we take into account not only the direct costs of parties (which include attorney's fees et al.) but also the indirect costs associated with litigation. The indirect costs of litigation can include for example the opportunity costs of witnesses, cost of taxpayers from use of the court-system, and undercompensation of jurors. Hence, the dissipation induced by litigation will be much higher.

$$R_{2,American}^e = (1 - p(e_1, e_2))L - p(e_1, e_2)W - e_2$$

Each litigant chooses the optimal effort in order to maximize his expected return from litigation. We indicate the optimal effort level for litigant 1 and 2 as e_1^* and e_2^* , respectively. Analytically, each litigant i chooses e_i such that $\max_{\{e_i\}} R_i^e$, $i = 1, 2$. The optimal levels of effort e_1^* and e_2^* are chosen according to the following first order conditions:

$$\frac{\partial R_1^e}{\partial e_1} = 0 \Rightarrow p_1'(e_1^*, e_2) = \frac{1}{W + L}$$

$$\frac{\partial R_2^e}{\partial e_2} = 0 \Rightarrow -p_2'(e_1, e_2^*) = \frac{1}{W + L}$$

where p_1' and p_2' is defined as the partial derivative of the probability function $p(e_1, e_2)$ with respect to effort levels e_1 and e_2 .¹²

The first order condition defines the *incentive compatibility constraint* that characterizes the optimal level of effort that each party is required to undertake for any effort level undertaken by the other party. In the case of symmetric litigation stakes, each litigant will find it optimal to undertake the same level of effort at equilibrium. Hence, $e_1^* = e_2^*$. If we model the probability of success using Tullock's (1967) explicit form, the equilibrium levels of effort of each litigant become:

¹² Under Tullock's assumption regarding the probability function, the marginal probability takes the following functional form respectively for the plaintiff and the prospective defendant: $p_1' = \frac{e_2}{(e_1 + e_2)^2}$ and

$$p_2' = -\frac{e_1}{(e_1 + e_2)^2}$$

$$e_{1,American}^* = e_{2,American}^* = \frac{W + L}{4}$$

and the total effort equals half of the sum of the parties' claim and counterclaim:

$$e_1^* + e_2^* \Big|_{American} = \frac{W + L}{2}$$

Not surprisingly, at equilibrium each litigant has an equal chance of winning the case, with

$p_1(e_1^*, e_2^*) = p_2(e_1^*, e_2^*) = \frac{1}{2}$, and parties spend half the value of the case on their litigation

efforts, with an expected return from litigation equal to:

$$R_{1,American}^*(e_1^*, e_2^*) = \frac{W - 3L}{4}$$

$$R_{2,American}^e(e_1^*, e_2^*) = \frac{L - 3W}{4}$$

Tullock's explicit form generates results that are consistent with the stylized fact according to which a sizeable portion of the total value of a case, approaching one half of the total value of the case, is on average paid by the two litigants in litigation costs and attorney's fees.¹³

1.3 Litigation under an English Rule

The litigants' litigation choices and the resulting litigation costs are likely to differ when parties litigate under an English rule. Tullock's model can be used to study the effects of a change in procedural rule on the parties' strategies and expenditures. Under an English rule, the losing party is required to compensate the prevailing party for the

¹³ As we may observe in real life, litigation costs rarely reach the level of full value of the case. Similar to Tullock's rent-seeking function, Parisi (1997) has shown that as the number of litigants increases (from 2 to 3), each litigant will find it less profitable to make effort and will reduce his investment in litigation. However, even though each litigant's effort decreases, the parties' total effort increases.

litigation costs that he incurred. In jurisdictions that follow the English rule, litigation costs are generally liquidated by the court on the basis of the fees established by the professional bar associations, which are computed on the basis of the extent of actual litigation costs (e.g., number of motions filed, number of hearings, length of briefs, etc.) and on the basis of the value of the case. The litigation fees that were paid in excess of the costs liquidated by the court remain uncompensated and are borne by the party that incurred them.

In the interest of generality, let's assume that in the event of a loss, the losing party is required to pay a fraction of the litigation cost to the other party. Analytically, let's denote the fraction of recoverable litigation costs with a and the non-recoverable portion of litigation costs with $1-a$. In the limiting case in which courts allow the prevailing party to recover the full amount of litigation costs, $a = 1$. Additionally, let's allow the court to also liquidate litigation fees on the basis of the overall value of the litigated case, as a percentual value b of the total value of case, $W + L$. A winning plaintiff would then recover such litigation costs in addition to his award of the case W . Symmetrically, the party who loses the case incurs the loss L , and will pay litigation costs as a fraction a of the winner's fees, augmented by a fraction b of the total value of the case. We can now use Tullock's model to investigate how the parties litigation strategies are affected by the adoption of the English loser-pays rule.

In the case of symmetric stakes and the English rule, the expected return from litigation for party 1 and 2 is respectively:

$$R_{1,English}^e = p(W + b(W + L) + ae_1) - (1 - p)(L + b(W + L) + ae_2) - e_1$$

$$R_{2,English}^e = (1 - p)(L + b(W + L) + ae_2) - p(W + b(W + L) + ae_1) - e_2$$

In an analogous way, each litigant chooses the optimal effort to maximize the expected

return from litigation. Analytically, each litigant i chooses e_i to $\max_{\{e_i\}} R_i^e$, $i = 1, 2$. The optimal levels of effort will satisfy the following first order conditions:

$$\frac{\partial R_1^e}{\partial e_1} = 0 \Rightarrow p_1'(e_1^*, e_2) \left[(1 + 2b)(W + L) + a(e_1^* + e_2) \right] + p_1(e_1^*, e_2) a = 1$$

$$\frac{\partial R_2^e}{\partial e_2} = 0 \Rightarrow -p_2'(e_1^*, e_2) \left[(1 + 2b)(W + L) + a(e_1 + e_2^*) \right] + p_2(e_1, e_2^*) a = 1$$

The first order condition defines the *incentive compatibility constraint* under the English rule and identifies the optimal level of effort that each party is required to undertake for any effort level of the other party.

We can use Tullock's explicit form to compare the parties' optimal expenditures in litigation under the two procedural regimes. In the case of symmetric litigation stakes, the equilibrium levels of effort of each litigant will be symmetric and equal to:

$$e_{1,English}^* = e_{2,English}^* = \frac{(W + L)(1 + 2b)}{4(1 - a)}$$

and total effort equals half of total value of the case, weighted by the non-recoverable cost

$$e_1^* + e_2^* \Big|_{English} = \frac{(W + L)(1 + 2b)}{2(1 - a)}$$

We immediately observe that litigants exert a higher effort level under the English rule than under the American rule, for any $a > 0$ and $b > 0$.¹⁴ In other words, the possibility of recovering any litigation costs, even partially may increase the individual incentives to litigate, thereby inducing higher individual investments in litigation. Hence, for any $a \geq 0$ and $b \geq 0$:

$$e_{i,English}^* \geq e_{i,American}^* \quad \text{for } i = 1, 2$$

and

¹⁴ In the limiting case $a = 0$ and $b = 0$, the English rule collapses back to the American rule: all litigation costs are non-recoverable.

$$e_1^* + e_2^* \Big|_{English} \geq e_1^* + e_2^* \Big|_{American}$$

Due to the symmetric litigation stakes, at equilibrium each litigant has an equal chance of winning the litigation, with $p_1(e_1^*, e_2^*) = p_2(e_1^*, e_2^*) = \frac{1}{2}$.

Consequently, under the English rule, the higher incidence of litigation costs will reduce the individual expected return from litigation, which then equals:

$$R_i^e(e_{1,English}^*, e_{2,English}^*) = \frac{W - 3L - 2(W + L)(a + b)}{4(1 - a)}, \quad i = 1, 2$$

As we will show in the following Section 3, larger legal expenditures may render certain categories of cases less worthy of pursuit, hence reducing litigation rates and overall dissipation in the judicial system. This has relevance for two distinct sets of reasons. First, even though under the English rule individuals may rationally spend more in litigation, they may choose to litigate less often. Once the participation constraint is taken into account, we can see that aggregate litigation expenditures may actually diminish under the English rule. Second, the cases selected for litigation will differ under the two regimes. As we will show, the likelihood that the parties will litigate will differ across different types of cases under the American and English rules. This may affect the patterns of legal evolution in the two systems under consideration.

2. Using Tullock's Function to Identify Optimal Attorney's Fees

Tullock's litigation model reveals that parties will undertake higher litigation efforts when litigation occurs under the English rule. The simple intuition is that under the English loser-pays regime, parties have larger stakes from litigation. This leads them to increase their effort levels in litigation. In Section 3 below, we will show that larger litigation efforts do not necessarily lead to a larger dissipation of the value of the case,

given the fact that costlier litigation will be undertaken less frequently. In the present section, we use Tullock's model to investigate whether there are ways to further mitigate the dissipation problem with the design of optimal attorneys' fees.

In order to carry out a meaningful comparison of alternative attorneys' fees structures, suppose the attorney fees should reflect attorneys' market value, which we can take as exogenously determined by market opportunity cost. Consider such value to be fixed as F . If the litigant wins the case, the prevailing party will receive the payment of legal costs, while the losing party has to pay double legal costs (his own legal cost plus the costs of prevailing party).

The expected return in case of fixed legal fees takes the following form:

$$R_i^e = p_i(e_i)(W + F) - (1 - p_i(e_i))(L + F) - e_i - F$$

Each litigant optimally chooses effort in such a way to maximize the expected return from litigation, hence the optimal levels of effort will satisfy the following first order conditions:

$$\frac{\partial R_1^e}{\partial e_1} = 0 \Rightarrow p_1'(e_1^*, e_2^*)(W + L + 2F) = 1$$

$$\frac{\partial R_2^e}{\partial e_2} = 0 \Rightarrow p_2'(e_1^*, e_2^*)(W + L + 2F) = 1$$

The first order condition defines the *incentive compatibility constraint* under a fixed payment to the attorney, defining the optimal level of effort each party is required to undertake for any effort level of the other party.

In the case of symmetric litigation stakes and a winning probability modeled according to Tullock's intuition, the equilibrium levels of effort of each litigant will be symmetric and equal to:

$$e_{1,Fixed}^* = e_{2,Fixed}^* = \frac{W + L + 2F}{4}$$

and total effort equals half of total value of the case and the double of fixed fees, i.e.:

$$e_{1,Fixed}^* + e_{2,Fixed}^* = \frac{W + L + 2F}{2}$$

Under a fixed attorney fee, the individual and total effort is higher than under the American rule, for any $F > 0$.

We have shown that an English rule leads to a higher dissipation of resources than an American rule. The attorney's compensation F can be generated with the adoption of different values of the parameters a and b (the fraction of recoverable litigation costs and percent of the total value of the case) introduced in Section 1.3. The relevant question to ask is what type of shape the legal fees should have under the English rule in order to minimize the dissipation of effort.

First, we derive the *iso-payment curve*, defined as the set of all pairs of parameter values (a, b) such that the fixed attorney fees is equivalent to the total legal cost under the English rule. Analytically the iso-payment curve has the following form:

$$F = ae_{English}^* + b(W + L)$$

The iso-payment curve is decreasing in the space (a, b) at an increasing rate.

Second, we derive the *iso-effort curve*, defined as the set of all pairs of parameter values (a, b) such that the optimal effort level exerted under fixed attorney payment is equivalent to the optimal effort level under the English rule for any pair of parameters (a, b) . Analytically, the iso-payment curve has the following form:

$$e_{English}^* = e_{Fixed}^*$$

The iso-effort curve is decreasing in the space (a, b) at a constant rate.

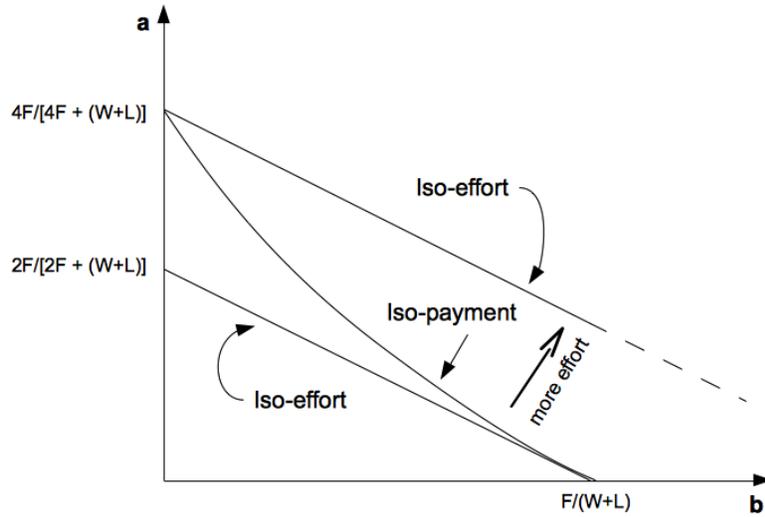


Figure 1: *Optimal Attorneys' Fees to Minimize Rent Dissipation*

From the graphical analysis of the curves, the iso-effort curve lies under the iso-payment curve, for any given value F . Additionally, in both corner solutions, the absolute value of the slope of the isopayment curve is higher than the one of the iso-effort curve.¹⁵ We immediately observe that dissipation of effort is minimized when litigants do not pay proportionally to the effort spent to win the case, but only proportionally to the total value of the case, measured by $W+L$. Hence the optimal solution is the corner solution, where

¹⁵ It is immediate from the analysis of the slopes of the iso-payment and iso-effort curve. The slope (in absolute value) of the iso-effort curve is constant and equal to $\frac{2(W+L)}{W+L+2F}$. The slope (in absolute value) of the iso-reimbursement is $\frac{4(W+L)(W+L+2F)}{(W+L+4F)}$ in the corner solution $b=0$ and $\frac{4(W+L)(W+L+2F)}{(1+2F)}$ in the corner solution $a=0$

$a=0$ and i'

This means that the optimality is achieved when we do not pay any effort back and we repay only a fixed fee, in order to reduce the dissipation of effort.

The previous analysis shows that the ways in which courts assess and liquidate attorneys' fees has an impact on the parties' incentives. In order to mitigate the dissipation induced by the English loser-pays rule, courts should liquidate attorneys' fees in favor of the winning party either as a lump-sum fee or on the basis of the objective value of the case, without reference to the actual litigation effort (e.g., extent of discovery, number of hearings, length of briefs) of the parties. Obviously, the court's liquidation of attorneys' fees applies to the amount that the losing party should reimburse the winning party. This has no implication on the fee structure that the party should pay to his own lawyer. The agreement between the party and his own attorney could and should probably be at least partially based on observable effort (if not made on a contingency basis, when effort is not observable) in order to solve the principal-agent problem between the client and his own attorney.

3. Choosing to Litigate: The Participation Constraint

In Section 1 we investigated the optimal incentives to litigate. We have characterized the incentive constraint of litigants and the optimal level of litigation undertaken, given their decision to file the case. In doing so, we have set out the analysis assuming that the litigants were involved in litigation, with no exit option. This allowed us to isolate the litigation choices from the existence of alternative settlement opportunities and from the parties' decision to participate in litigation. In this section, we can now consider the parties' participation choices and the impact that alternative procedural rules

have on the selection of cases that will go to litigation.¹⁶

The analysis of the parties' incentives to engage in litigation can be carried out extending Tullock's rent-seeking model, to characterize the participation constraint of litigants. A prospective plaintiff i will rationally file suit and initiate litigation if the expected return from litigation is positive:¹⁷

$$R_{i,American}^e \geq 0$$

Under the American rule the participation constraint for the plaintiff is satisfied when the proportion of gain to loss in litigation is higher than 3, i.e. the gain should be triple the loss in the litigation:

$$\frac{W}{L} \geq 3$$

Under the English rule the participation constraint of the plaintiff is satisfied when the proportion of gain to loss in litigation is higher than a threshold, i.e.:

$$\frac{W}{L} \geq \tilde{k}$$

where $\tilde{k} = \frac{3+2(a+b)}{1-2(a+b)}$. Note that the threshold $\tilde{k} > 3$ for any $a > 0$ and $b > 0$. This

implies that it is more difficult to satisfy the participation constraint under the English rule than the American rule.¹⁸ In line with Tullock's (2005c) intuition, these results indicate that under an English loser-pays rule, the rent dissipation is lower than under an American rule, despite the higher individual effort level chosen by each litigant at equilibrium. Under the

¹⁶ Case selection is simply the idea that parties will choose whether or not to litigate (as opposed to settle, or not bring a claim at all) a given dispute based on the expected returns from litigation.

¹⁷ Qualitatively similar results are obtained if we consider the parties' out-of-court settlement opportunities. In the presence of a settlement offer, say S , the expected return from litigation would have to be higher than the offered settlement amount, $R_{i,American}^e > S$.

¹⁸ Also in this case, qualitatively similar results are obtained in the presence of a settlement offer, S . Litigation will be carried out in this case if $R_{i,English}^e > S$.

English rule litigants will find it convenient to enter the litigation process in a lower number of cases than under the American rule, leading to a lower aggregate rent dissipation.

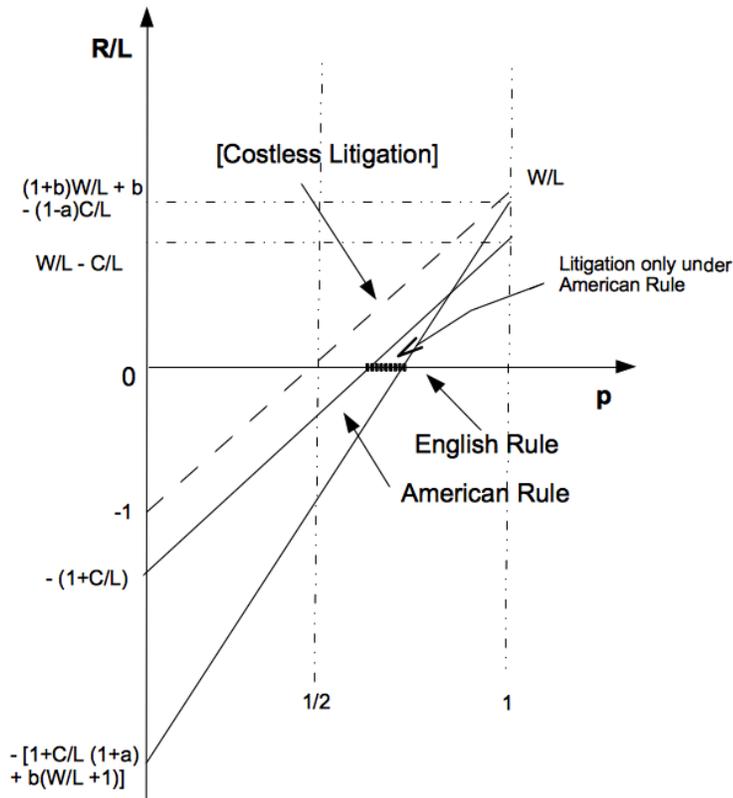


Figure 2: *Effect of the English and American Rules on Litigation*

This is because under the English rule, when the litigants enter the litigation, they will face higher losses if they do not win the case, since they need to repay the litigation costs (or at

least a fraction of the litigation costs) of the opponent. Hence, it is less convenient to enter litigation with lower probabilities (needing higher stakes to counterbalance the higher litigation costs).

4. From Litigation to Legal Evolution: Efficiency Hypothesis Revisited

The efficiency of the common law hypothesis has been around for over thirty years, and continues to generate interest and a growing scholarly research agenda (Rubin, 2009).¹⁹ Tullock takes a clear stand against the efficiency of the common law hypothesis advocated by the Chicago School. Tullock argues that the development of the common law will not lead to efficiency and will reflect the same sorts of rent-seeking pressures as legislative decision-making. Tullock concludes that the common law cannot be claimed to be superior, and it will in fact be no more efficient as a macroeconomic system than the civil law. By using a rent-seeking model, Tullock shows that the common law creates incentive for individuals to engage in litigation that lead to suboptimal social outcomes, relative to other legal systems. Tullock goes against much of the wisdom in the literature by asserting the superiority of lawmaking through politics, such as under the Civil law, over lawmaking through litigation, such as under the Common law: “The European procedures are far superior in clarity, precision, and implementation to the U.S. Common law procedures. They lead to a more accurate verdicts at a significant lower cost. Essentially, the United States clings to an inefficient legal system which developed in the Middle Ages without much thought and which has evolved through centuries without serious examination into whether or not its basic premises are sound” (Tullock, [1997], 2005c, p. 454).

¹⁹ For early critical analyses on the evolution of the Common law, see Landes and Posner (1979), Cooter and Kornhauser (1980), Rubin (1982), Aranson (1992). For a critical analysis of evolution of legal rules, see also Hirshleifer (1982), Hadfield (1992), Roe (1996) and Hathaway (2001). For the discussion of the macro efficiency in an Hayekan perspective see Mahoney (2001) and Zywicki (2003). For a review of literature on the evolution of Common law, see Rubin (2005).

4.1 *Rent-Seeking Through Litigation: Challenging the Efficiency Hypothesis*

According to Tullock, litigation can be viewed as a rent-seeking process with a stochastic outcome. Tullock argues that there is no reason to believe that self-interested parties competing for a positive outcome in the litigation process will bring to a social benefit in terms of efficient law, instead of seeking to maximize their return from litigation with unpredictable results. Tullock ([1997], 2005c, p. 423) questions critically on the common law system: “Do we want our resources to be put to competitive rent-seeking? There is a real possibility that the rent-seeking costs of a transaction may exceed the social product.” This argument is in complete opposition to the arguments put forth in favor of the common law, according to which legal system can be modelled as a market to decide the efficient allocation that maximizes welfare.

Tullock is skeptical of the litigation-is-like-the-market metaphors used to explain the efficiency hypothesis. As is well-known in the literature, the selection of parties’ cases for litigation is a critical factor for the understanding of the evolution of common law. An important ingredient of most efficiency theories of the Common law is the criterion for selecting which disputes will be litigated.²⁰ Only disputes that are actually litigated are

²⁰ The demand side explanations of the efficiency of the common law hypothesis frequently involve the concept of case selection. Several early contributions provide the foundation for “demand side” explanations of the efficiency of the Common law. The early work of Landes (1971) first hinted at this premise, considering the amount of litigation in a society as a function of how public court services were administered. The demand side explanations were later extended by Rubin (1977) and Priest (1977). Rubin (1977) argued that efficiency of the Common law is best explained by noting that parties are more likely to litigate inefficient rules than efficient ones. The pressure for Common law to evolve to efficiency, he argues, rests on the desire of parties to create precedent because they have an interest in future similar cases. Priest (1977) articulated an idea that is similar to Rubin’s (1977), arguing that the common law tends to develop efficiently even in the face of potential judicial hostility toward efficient outcomes. The basis for Priest’s claim, however, is that litigation is driven by the costs of inefficient rules, rather than the desire for precedent: inefficient rules impose greater costs on the parties than do efficient rules, thereby making the stakes in a dispute greater. An increase in litigation stakes increases the likelihood of litigation. This means that efficient rules tend to be less contested than inefficient rules, increasing their “survival rate.” In this way, according to Priest, the legal system perpetuates selection of efficient legal rules. See also Goodman (1978) and Terrebonne (1981) for early contributions to the efficiency of the Common law hypothesis.

capable of generating legal precedents and, according to Tullock, the private and social incentives to file for litigation are misaligned in a common law system.

Tullock's criticism against the proponents of the litigation-like-markets metaphor is quite direct: "In the view of Posner ... the process of Common law adjudication leads to the survival of efficient rules. ... In his zeal to liken the Common law system to private market, Posner oversteps the mark. The Common law system is not a private marketplace." (Tullock ([1997], 2005c, p. 450). Other proponents of the efficiency hypothesis, including Rubin (1977) and Priest (1977) are not spared criticism by Tullock: "It is argued that the courts will be utilized more frequently to resolve disputes when the existing rules relevant to that dispute are inefficient, and less frequently when the rules are efficient. Once efficient rules have evolved, their existence lowers the incentive for future litigation, thus raising the probability that such rules will endure. In this perspective, efficiency is the outcome of evolution generated by the myopic utility-maximizing decisions of potential litigants rather than any efficiency predilections of judges. Rubin applies this theory to accident liability law and demonstrates that where both parties to a dispute have an ongoing interest in efficient outcomes, efficient evolution is a predictable consequence of litigation." (Tullock ([1997], 2005c, p. 431-2). Tullock ([1997], 2005c, p. 432) criticizes these claims, pointing out that "His [Rubin's (1977)] result is not general. If only one party to a dispute is far-sighted, precedent will evolve in favor of that party, as occurred, for example, in nineteenth-century nuisance law, which tended to favor large corporations. If there is no far-sightedness, the status quo may persist despite the imposition of significant efficiency losses on both parties to the dispute. High litigation costs, imposed by legal rent-seeking, may also impede litigation on inefficient rules and obstruct the efficient outcome."

Cooter and Kornhauser (1980) also fall under Tullock's ([1997], 2005c, p. 432) attentive scrutiny: "Cooter and Kornhauser [...] model legal evolution as a Markov process.

They determine that blind evolution will not take the legal system to an efficient equilibrium. Instead, the Common law settles down to a stable state in which each legal rule prevails for a fixed amount of time. The system never settles down to a situation in which the best rule prevails forever, even when bad rules are litigated more frequently than good rules, and even when judges are more likely to replace bad rules by good rules and vice versa”.²¹

4.2 *Evolution of the Common Law under the English and American Rules*

The results of the previous sections used Gordon Tullock’s rent-seeking model in the context of litigation and can now be used to shed some additional light on the debate regarding the efficiency of the common law. In the following we will do so by considering the effect of the procedural regimes considered in this paper on the dynamics of legal evolution.

We compare the evolution of the legal system under the American and English rule. We consider the impact of asymmetric stakes and costly litigation on the process of case selection and evolution.

In presence of asymmetric stakes, the plaintiff is awarded W in case of a plaintiff verdict. In case of a defendant verdict, the plaintiff pays L to the defendant. Note that a case may be rationally filed even when the probability of success is smaller than one half.

²¹ Priest and Klein’s (1984) “selection hypothesis” indicates that when both parties have equal stakes in litigation, individual maximizing decisions of the parties create a strong bias toward a success rate of plaintiffs at trial (or appellants on appeal) regardless of substantive law. Fon and Parisi (2003) used a set-up similar to Priest (1977), allowing the probability of success to be affected by the ideology of judges. Some judges’ ideology or some jurisdictions may be more likely to decide in favour of plaintiff than other pro-plaintiff courts. Then prospective litigants that are within the jurisdiction of a pro-plaintiff court will satisfy the participation constraint more frequently than others. Hence judges with a pro-plaintiff inclination will be more likely to hear new or borderline cases than their pro-defendant colleagues. This gives pro-plaintiff courts more “voice” in the process of legal evolution, with a resulting bias. Fon, Parisi and Depoorter (2005) extended the traditional analysis to study the effect of asymmetries in litigation stakes and litigation costs on the process of legal evolution. For other contributions suggesting that the evolution of the Common law may be biased, see Rubin and Bailey (1994). For specific applications on the evolution of legal systems, see Benson (1989), Barzel (2000), Stake (2005), La Porta, Lopez-de-Silanes, Shleifer and Vishny (1998).

This however may trigger a contraction wave, leading to a flow of negative precedents and implying a negative impact on the likelihood of success of similar cases in the future. This is true for all those cases associated with a percentage of positive precedents below $\frac{1}{2}$. For all cases corresponding to $p > \frac{1}{2}$, the probability of success for litigation is above the relevant threshold and a wave of expansion will be triggered out.

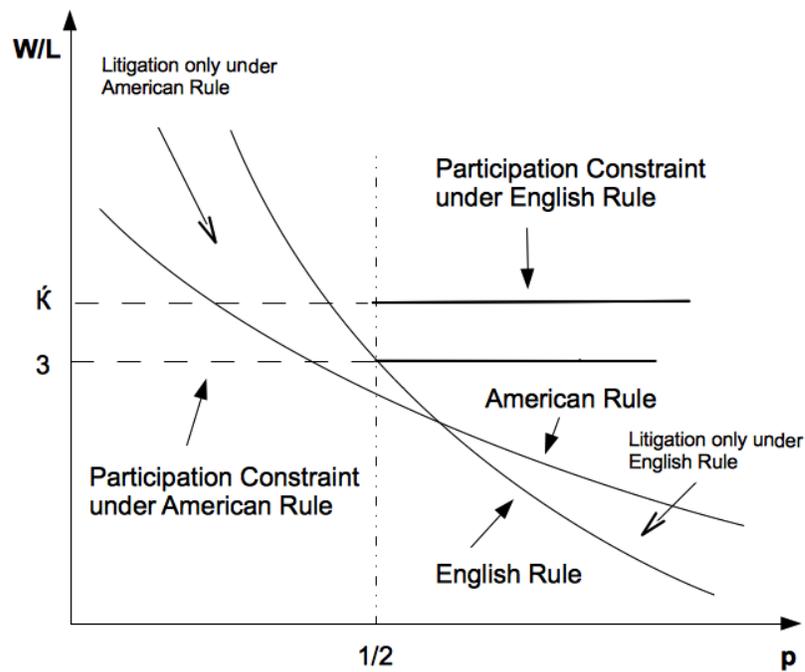


Figure 3: *Evolution of the Common Law under the English and American Rules*

The analysis takes into account litigation costs, which are borne by parties in different measures according to the either English or American rule (in line with the modeling in previous Sections). Note that under English rule it is more difficult for a plaintiff to file a

case with positive expected return due to the higher costs of litigation in case of a loss. Figure 3 shows the areas for which the participation constraint is satisfied under the English rule and American rule. The participation constraint is more binding under the English rule for cases characterized by a lower probability of success. This is coherent with Tullock's prediction of a lower rent-dissipation. This will lead to a consolidation or expansion of remedies under the English rule, since litigants will enter litigation only when the probability of a favorable outcome is higher.

5. Conclusions

Although in the early years of the law and economics movement, Gordon Tullock remained a solitary voice in his critique of the common law, the recent results in the law and economics literature have vindicated Tullock's wisdom.

In the present work we do not allow for strategic behavior. In real life situations litigants may threaten to file even in the presence of negative expected return from claims in order to extract value. This situation appears to be especially relevant in the presence of asymmetric information. At same time the threat of filing a negative claim dilutes the incentive to settle out of court since there is a positive probability that the threat is not real. The analysis can be extended in order to take into account the possibility of strategic behavior and its impact on legal evolution.

Tullock (1980) considers players with economies of scale in litigation, for example when witnesses collaborate with one another to reinforce what the other says, or to map out a cooperative strategy. In the presence of economies of scale, Tullock's paradox materializes: if the participation constraint is violated, neither party has an incentive to litigate, and nobody appropriates the value of litigation. However, if no one enters litigation, each potential litigant is willing to file the case and appropriate the value W of

the case with minimal effort. Dari Mattiacci and Parisi (2005) solve Tullock's paradox by allowing parties to adopt a mixed participation strategy, according to which potential litigants participate but not all of the time (so that the probability of entering litigation is less than one). In some cases both potential litigants file the case, in others neither files (thereby the entire value of the case is lost) and in other situations only one participates and wins W . The present work can be extended in order to consider the presence of economies of scale on litigation choices and how the Tullock's paradox is reinforced in the presence of an English rule.

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