RENT-SEEKING THROUGH LITIGATION: ADVERSARIAL AND INQUISITORIAL SYSTEMS COMPARED

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Published in *International Review of Law and Economics,* Vol. 22, No. 2, August 2002, pp. 193-216

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ABSTRACT: This paper compares the adversarial system of adjudication, dominant in the common law tradition, with the inquisitorial system, dominant in the civil law tradition, using a rent-seeking, Nash equilibrium, model of litigation expenditure in which the litigants simultaneously choose their levels of effort with the goal of maximizing their returns from the case. The choice between the two systems is modeled as a continuous variable showing the equilibrium solutions of the game and their implications for procedural economy. The results are then utilized to characterize the optimal levels of adversarial and inquisitorial discovery with respect to the social benefits of truth finding and correct adjudication, and the private and administrative costs of litigation.

"[A] common law trial is and always should be an adversary proceeding."

Hickman v. Taylor, 329 U.S. 495, 516 (1947) (Jackson, J., concurring).

Scholars of comparative civil procedure often contrast American and continental European legal systems by reference to the distinctive functions fulfilled by judges and lawyers in the two legal traditions. A distinction is often drawn between "adversarial" and "inquisitorial" procedural systems. The two opposing paradigms refer to the different roles played by the judge in the conduct of a civil case.

In a typical inquisitorial proceeding, the trial is dominated by a presiding judge, who determines the order in which evidence is taken and who evaluates the content of the gathered evidence. In those proceedings, the court determines the credibility and relative weight of each piece of evidence without being constrained by strict rules in that respect. By contrast, in a typical adversarial system, the case is organized and the facts are developed by

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the sole initiative of the parties. The process develops through the efforts of the litigants before a passive decision maker who reaches a decision on the sole basis of the evidence and motions presented by the litigants.

Law and economics scholars have occasionally examined the various methods of discovery in a comparative perspective. The discussion has often invoked alternative ideological paradigms. Most notably, in a well-known debate, Posner (1988) and Tullock (1988) have taken opposite sides on this issue, defending respectively the adversarial and the inquisitorial systems, on a variety of grounds. Posner argues that the adversarial system is preferable because it allows the parties who bear the costs and benefits of the litigation to shape the litigation. Alternatively, the inquisitorial method shifts power to judges, and thus promotes an expansion of the public sector as well. Posner contends that it is doubtful whether such a shift would improve the performance of our judicial system.

In this paper I consider the strategic implications of these procedural alternatives, showing the impact of a change in the extent of the inquisitorial role of the judge on parties' incentives to expend in litigation. In Part I, I consider the key differences between the conduct of a case in an adversarial procedural system and an inquisitorial system. The analysis evaluates some general features of alternative modes of discovery. The results can be extended to both civil and criminal procedure, notwithstanding the different goals and concerns associated with civil and criminal adjudication. In Part II, I show the impact of the two procedural rules on the equilibrium expenditures on litigation for the two parties. The results suggest that both an increase in the weight attached to the judge-obtained evidence and an increase in judicial scrutiny of the adversary's arguments and evidence will have a negative impact on the equilibrium levels of litigation expenditures undertaken by the litigants. In Part III, I depict the optimal weight to be attached to the inquisitorial efforts of the judge as the value that maximizes the social benefits from truthful adjudication net of the private and administrative costs. The comparative statics of the model show how the optimal weights placed on the adversarial and inquisitorial components of the process vary with some key features of the cost and benefit functions. The results indicate that the optimal weight attached to the adversarial component of the process is positively related to the visibility and social relevance of the litigated case and to the judicial scrutiny applied by the court to the parties' evidence, while it is negatively related to the private cost of litigation for the parties, the relative efficiency of the court in obtaining and evaluating evidence, and the number of litigants competing

for the adjudication of a fixed award. Part IV offers a few concluding remarks about the costs of the adversary system.

I. THE ADVERSARIAL AND INQUISITORIAL SYSTEMS COMPARED

The distinction between adversarial and inquisitorial systems finds its origin in twelfth century European law. Adversarial processes could only be initiated by the action of a private party (the so-called *processus per accusationem*), while inquisitorial proceedings could be triggered ex officio by the judicial system (the so-called *processus per inquisitionem*).

The meaning of the distinction evolved in later medieval times to include other features generally associated with the two procedures.[2] Most notably, the distinction came to refer to the general role of the judge in the fact-finding phase of the trial. In medieval times, the judge was generally conceived as an official truth seeker. In a well known *dictum*, fourteenth century jurist Bartolus from Sassoferrato argued that, with or without a proposal by a party, courts could produce and examine witnesses for the purpose of truthful discovery.[3] Along similar lines, Baldus de Ubaldis, a jurist who wrote during the second half of the fourteenth century, argued that, because of their institutional role as cognitional judges, medieval courts were at liberty to hear those witnesses whose depositions they considered necessary

[2] In a recent paper, Glaser and Shleifer (2001) have suggested that the inquisitorial system developed in France as an instrument for the protection of law enforcers from coercion by litigants through either violence or bribes. The higher the risk of coercion, the greater the need for protection and control of law enforcers by the state. According to the authors, this explains why, in the 12th and 13th centuries, the relatively more peaceful England developed trials by jury, while the less peaceful France relied on state-employed judges for both collecting evidence and making decisions. Despite considerable legal evolution, these initial design choices have persisted for centuries, explaining many differences between common and civil law procedural traditions.

[3] Bartolus a Saxoferrato (1313-1357), Comment to C. 9.42.2, no. 2, fol 124: "judex tamen potest ex officio suo testes producere ad inquirendam veritatem."

for establishing the facts at issue.[4] Production and evaluation of the evidence were the sole prerogatives of the judge who could summon witnesses to assist the court's fact-finding efforts. In this context, Baldus further argued that it was not part of the prerogatives of the individual litigants to examine the witnesses or to produce them.[5]

Historically, the procedural systems of the common law tradition developed away from the inquisitorial models, adopting the adversarial paradigm of adjudication in both criminal and civil legal proceedings. In common law proceedings the presentation of evidence became the exclusive task of the parties. As pointed out by Damaska (1997) this is not surprising, given the absence from England of an official apparatus capable of routine judicial investigations. In spite of much legal evolution, the ancient roots of the adversarial trial are still evident in the current rules of procedure.[6] The role of the victim in the trials against the accused is replicated in modern times trough the adversarial process, with a public accuser carrying out the victim's task in the accusation of the wrongdoer.

Nineteenth century classical liberal ideas allowed the adversarial model to outlive its historical origins. Adversarial procedure was defended for its closer proximity to "dialectical" models, with emphasis on assertion and refutation, and yet attacked by enlightened rationalists, generally skeptical of information provided by biased and self-interested actors.[7] In the evolved conception of the adversarial procedure, the parties' attorneys became responsible for discovering and presenting evidence for their clients and for

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[4]Baldus de Ubaldis (1327-1400), most notably, in Comment to C. 4.20.19 no. 3, fol. 53: In examinandis testibus officium judicis debbe eese curiosum, id est, judex debet eese solicitus et ad curam judicis pertinet hoc scil. examinare, unde hoc non est in potestate parties"

[5]Baldus de Ubaldis (1327-1400), Comment to C. 1.3.8 no. 8 fol. 37: "Pone, quod testes non sunt producti, sed judex ex mero officio recipit eos".

[6]Damaska (1997) at 118 observes: "The interaction with the accused constantly injected disputational, "altercating" notes into proceedings — long before the admission of lawyers to felony trials gave rise to the adversary criminal trial as we now know it"

[7]On the theoretical underpinning of this debate, see, more extensively, Damaska (1997) at 101.

challenging the evidence presented by their opposition.[8] Similarly, the parties bore the full responsibility for presenting the law: legal theories were formulated by the parties' attorneys and expressed in oral and written arguments. In this setting the judge played the role of a neutral and passive arbiter, ruling, often without explanation, on objections and contentions moved by the parties. Even relatively active judges were limited in the scope of their action, compared with the role played by the typical judge serving in a civil law jurisdiction.[9]

In the current legal usage, the distinction between inquisitorial and adversarial proceedings continues to refer to the general differences in approach between the civil law and common law procedural systems.[10]

In a typical common law trial, the process is party-controlled. The case is organized and the facts are developed by the sole initiative of the parties.[11] The process develops through the efforts of the litigants before a passive decision maker who reaches a decision on the sole basis of the evidence and motions presented by the parties. In an adversarial system of legal procedure, the judge thus enjoys limited initiative in the process. While the judge has

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[8]Hazard and Taruffo (1993) at 88 observe that: "The advocate conducts the pretrial discovery against the opposing party. This involves taking the depositions of potential witnesses, including the opposing party, and identifying and inspecting relevant documents in the opposing party's possession. In complicated business litigation, thousands of such documents must be reviewed and analyzed. Discovery may require weeks or months of the advocate's effort, sometimes over the course of years before the anticipated trial date".

[9]This paper considers the adversary common law process as it relates to civil proceedings. The dogma of adversarial discovery is equally applicable to the criminal proceedings in common law jurisdictions: "The principles announced today deal with the protection which must be given to the privilege against self-incrimination . . . . It is at this point that our adversary system of criminal proceedings commences, distinguishing itself at the outset from the inquisitorial system recognized in some countries." *Miranda v. Arizona*, 384 U.S. 436, 477 (1966).

[10]More generally, see Damaska (1986) for a comparative analysis of the different approaches to the administration of justice in the civil law and common law traditions.

[11]See Chayes (1976) for a stylized description of the role of the judge in U.S. litigation.

some discretion over the nature and extent of his or her participation, in no case may he or she contribute to the fact-elucidation efforts of the parties. The truth of the case cannot be searched directly by the judge, but shall instead emerge out of the adversarial dynamic of the process, with a partisan presentation of the facts.[12]

In a typical civil law trial, judicial officials perform a more active role which is not limited to the examination of the evidence presented by the parties or to the execution of the parties' motions. The control over the process is shifted from the parties to the court, who enjoys greater discretion in the evaluation of the evidence and may guide the discovery process with bench requests. In these systems, the presiding judge determines the order in which evidence is taken and is free to weigh up the relative value of conflicting evidence, acting independently of the proposals and motions of the parties (Ullmann, 1946). The inquisitorial character of the procedure generally implies that judges are generally not bound by any formal rule in the evaluation of the facts but are to decide on the basis of their "internal conviction" (*intime conviction*).[13] Accordingly, in several civil law jurisdictions, the court determines the credibility and relative weight of each piece of information without being guided by formal rules of evidence.[14] In this respect, the court is vested with a large degree of initiative to shape the course of the litigation. Concepts such as "plaintiff's case" or "defendant's case" are unknown to the procedural systems of the civil law tradition.[15] In a typical civil

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[12]See Landsman (1983) for a more detailed description of the adversarial system and a discussion of its development in the United States.

[13] See, e.g., Article 427 of the French Code of Criminal Procedure.

[14] According to Wengeld (1983), comparative legal scholars usually consider the French criminal procedure as the prototype of the inquisitorial model, where judges enjoy full discretionary power in the examination of the evidence. The same principles apply in the Japanese and Spanish systems, even though evidence is presented by the parties. Japanese criminal procedure law originally followed the model of the French and German codes, but after Word War II, American procedural principles were superimposed on its inquisitorial structure.

[15]Langbein (1985) describes the concepts of "defendant's case" and "plaintiff's case" as traffic rules for the for the partisan presentation of evidence to an ignorant and passive trier of facts.

law court, the judge contributes to ascertaining the facts and identifying potentially relevant evidence, and actively screens and evaluates the evidence presented by the parties.[16] The civil law judge has authority to investigate the facts on his own initiative, exercising the power by asking supplemental questions when the advocates have concluded their questioning, and often conducting the primary examination of witnesses.[17]

In an inquisitorial proceeding, the direct involvement of the judge in the gathering of evidence often avoids the consolidation of two contrary point of views resulting from an independent partisan search and presentation of the facts. In contrast, an adversarial process often leads to two clashing positions. As pointed out by Damaska (1997) this format is often conducive to an exacerbation of the differences and a neglect of the common grounds: "Neutral information tends to be short-changed. ... the world presented to the triers of fact is illuminated by two narrow beams of light".[18] Froeb and Kobayashi (2000) have further analogized the fact finding process in an adversarial system to an "extremal" estimator based on the difference between the most favorable pieces of evidence produced by each party.[19] This, in turn, yields an

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[16]For a description of the German inquisitorial approach, see more extensively Langbein (1985).

[17]The civil law judge often takes initiative for gathering additional evidence, and reviews the evidence presented by the parties in detail – recapitulating it prior to reaching a decision. In most jurisdictions this authority is conservatively exercised. Hazard and Taruffo (1993) at 86, observe that, in practice, neither system fully corresponds to its theoretical model: "In the civil law system the judge has dominant authority to determine the legal theory to be applied, but the judge is highly dependent on the parties for presentation of the evidence. Common law judges have authority to initiate inquiry into the evidence but rarely exercise it. In this sense, both systems depend on adversary presentations so far as the facts are concerned, notwithstanding the theoretical differences between their conceptions of the judge's role".

[18]Damaska (1997) at 100.

[19] Froeb and Kobayashi (2000) suggest that the advantage of the adversarial regime of judicial decision-making is the superior information of the parties while the advantage of an idealized inquisitorial regime is its neutrality. The authors characterize the properties of the estimators utilized under the two evidence regimes, analogizing the decision making process under an adversarial system to an "extremal" estimator based on the difference between the most favorable pieces of evidence produced by

important testable proposition: with the judge's involvement vanishing, the litigants' differences will surface more noticeably, and greater overall expenditures in litigation will obtain.

In a typical civil law case, the active participation of the judge in the gathering and evaluation of evidence further creates a blurring of the distinction between pretrial and trial. As pointed out by Adams (1998) this implies that in civil law jurisdictions, trial is not a single continuous event. Rather there are several hearings in which the court meets with the litigants to gather and evaluate the evidence of the case. The ongoing involvement of the judge in the discovery process has important implications for procedural economy.

In a two-stage process, the parties tend to gather and disclose all the evidence that may in some way relate to the litigated case. Evidence that is not gathered and disclosed in the pretrial phase often becomes inadmissible at trial. Given the likely uncertainty over the usefulness and relevance of each piece of information in the later trial phase, the litigants tend to introduce much more evidence than is actually utilized in the trial phase. The litigants compete in the adversarial supply of information, in order to dominate the opponent in the subsequent presentation of their case. Such advantage may indeed prove very valuable in jury trials, where a lay jury decides, in the absence of a professional judge, which facts have been proved.

In a one-stage process, instead, the judge guides and actively participates in the discovery process, indicating the issues and factual questions that he would like to investigate. In doing so, the court confines the scope of the adversarial supply of information by the parties to those issues that appear more obscure to him. The judge will discourage the litigants from dissipating their efforts and resources to prove a factual circumstance that has been rendered irrelevant by other findings of the court. The parties have an opportunity to get some preliminary feedback from the judge as to the likely

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each party; conversely, the inquisitorial system is analogized to an unbiased sample mean. The authors find that neither regime dominates the other. In a previous paper, Froeb and Kobayashi (1996) consider an additional critique often moved to the adversarial process, namely the use of juries and lay fact finders. The authors suggest that the criticisms of the jury process based on jury bias is often overstated, and stress the importance of competitively produced evidence in legal decision-making.

relevance of costly information, thus avoiding expenditures in discovery that may later prove unnecessary or irrelevant.

II. RENTS, RENT-DISSIPATION, AND RATIONAL LITIGATION

The dichotomous distinction between adversarial and inquisitorial proceedings obviously embraces several dimensions of the legal process, summarizing them within two discrete categories. This approach has been criticized by scholars of comparative law who observe that there are too many elements that these legal terms attempt to consider.[20] The legal systems of the world, although historically interrelated, have assumed different forms and procedural connotations that render the dichotomous distinction inapt.[21] The following analysis considers the adversarial nature of the process as a continuous variable.[22] This enables us to consider the range of real world alternatives without artificial and arbitrary dichotomies.

In the model developed in the present section, I follow the conventional wisdom (Posner, 1973; Damaska, 1983), which models the dispute resolution process as a simulation of, and substitute for, the private conflict between two parties. This leads to the central image of proceedings as

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[20]See, for example, Damaska (1986) at 3-6.

[21]Until recent years, comparative legal scholars have refused to theorize on the respective merits of the two systems. The analysis involved too many legal dogmas and intellectual beliefs and any comparative evaluation would have appeared, on the whole, quite suspect. Even on purely methodological grounds, differences of opinion dominate. Jorg, Field, and Brants (1995). While agreeing that real world adversarial and inquisitorial systems of (criminal) procedure are converging and do not follow their ideal types, Jorg, Field, and Brants observe that the systems' basic ideologies about truth seeking are different enough that they could never converge entirely, nor present an entirely continuous set of systems.

[22] In a recent paper, Posner (1999) at 16 argues that the use of amateur judges (the jurors) in the typical adversarial proceeding makes it difficult to situate the adversarial system on a continuum with the inquisitorial. For the purpose of this paper, I will consider the features of the adversary system as independent of the use of a jury. This will allow us to use a single continuous variable to characterize the adversarial or inquisitorial nature of the process.

a contest of two sides before a judge or arbiter. According to this line of thinking, the task is then to consider alternative procedural arrangements as instrumental to the most efficient resolution of the parties' conflict. For example, if the judge were permitted to conduct independent inquiries into the facts of the case, the discovery process would logically cease to be a mere party contest and the return to private litigation efforts would be reduced accordingly.

In this setting, I classify procedural systems according to the allocation of control over the process and the relative dominance of inquisitorial and adversarial formats. The variable I captures the weight attached to the inquisitorial (i.e., non-adversarial) findings in determining the size of the award. Greater values of I indicate that the judge, as opposed to the litigants, has greater control over the process, or that the evidence obtained directly by the judge is, *ceteris paribus*, given greater weight than the evidence provided by the parties. I use the subscripts A and I to identify the returns from the adversarial and inquisitorial components of the litigation.

In this model, legal expenditure at trial is endogenous.[23] In this section, I consider how the equilibrium expenditures in litigation vary with the institutional choice of I. E_J is the judicial effort exerted by the court in independent investigation and examination of independently obtained evidence. This level of effort will depend positively on the level of I. S denotes the level of scrutiny to which the evidence provided by the parties is subjected. S is considered a parameter for our analysis, and is not chosen by the judge. The level of S may denote procedural safeguards against the admission of certain types of evidence, like hearsay. As S increases, the likelihood than any piece of evidence submitted by the parties will be discarded increases, and so the equilibrium level of expenditures by the parties will decrease.

Following Posner (1973 and 1999), I set the probability of prevailing in litigation as a function of relative party expenditures. Equilibrium is achieved via independent spending decisions by the litigants. In this model, a

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[23]Braeutigam, Owen and Panzar (1984) have utilized a similar approach to study the different equilibrium expenditures at trial under the English and American rules, for the recovery of legal fees. Hause (1989) followed the same approach considering asymmetric beliefs and probabilities. Most recently Farmer and Pecorino (1997) have modeled endogenous legal expenditures utilizing a rent-seeking framework for the study of the institution of fee shifting.

relative increase in litigation spending reduces the opponent's expected return from the case.[24] More specifically, the parties' total expected return R^e depends upon the following two components: (i) the merits of the disputed case, R_I, as ascertained through the inquisitorial discovery; (ii) the disputed case, R_A, captured through the adversarial efforts of the parties $E_{p,d}$. A shift in the weight attached to the inquisitorial and adversarial components of the process may change the expected return from the parties' case. The total marginal effect of a procedural change for all parties is zero-sum.[25] Note that R_I and R_A represent plaintiff awards. The former represents the award level that would be given if no adversarial effort is exerted, and the judge's decision is made only on the basis of independently gathered evidence. The latter is the award amount that results from the parties' evidence. The plaintiff's adversarial award amount will depend on R_A and on the relative amount of effort he spends in litigation.

The return from the non-adversarial component is a function of the underlying merits of the plaintiff's case as well as the judicial discovery efforts, E_J. The returns from the adversarial component, instead, are a proportional share function of the parties' respective efforts, and the residual value of the case which depends on the adversarial evidence and the level of scrutiny that evidence is subjected to by the court. An adversary's expected return from the case is a weighted average of the inquisitorial and adversarial components, with the institutional choice variable I determining the weights. The same functional form could be used to characterize a winner-takes-all system where the parties' respective probabilities of success are proportional to their shares of effort.

For two litigants (plaintiff, defendant), the respective objective is to maximize their expected return from litigation. For the typical case of a zero-sum judgment, the plaintiff will try to maximize the net judicial award, while the defendant will try to minimize the total loss from litigation. The plaintiff's

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[24] With similar consequences, in Posner (1973) a relative increase in litigation spending merely reduced the opponents' probability of winning.

[25] The zero-sum constraint implies that, setting aside costs of litigation, $\partial R_p/\partial I + \partial R_d/\partial I = 0$. The implicit relationship between R_I, R_A, and I, allows for a fixed share coefficient of the type $J = IR_I + (1 - I) R_A$, but is not limited to it. Indeed, there may be a correlation between the judgment level J and the degree of adversary litigation. The variability of total J with respect to I may indeed be necessary to account for the (fragmentary) evidence offered by comparative legal scholars regarding the different measures of pecuniary judicial awards in the American and European legal traditions.

objective could thus be to maximize:

$$R_p^e = IR_I(E_J) + (1-I)R_A(S)\frac{E_p}{E_p + E_d} - CE_p \tag{1.1}$$

Symmetrically, the defendant wishes to minimize the sum of the expected judgment and his litigation costs. This objective can be represented as maximizing:

$$R_d^e = -IR_I(E_J) - (1-I)R_A(S)\frac{E_p}{E_p + E_d} - CE_d \tag{1.2}$$

Given the zero-sum constraint, the effect of a change in procedure, I, on the parties' expected payoffs will have opposite signs for the two litigants.[26]

The first order conditions for the optimal levels of efforts, E_p* and E_d*, for each party will be respectively:

$$H_p = \frac{\partial R_p^e}{\partial E_p} = (1-I)R_A(S)\frac{E_d}{\left(E_p + E_d\right)^2} - c = 0 \tag{1.3}$$

$$H_d = \frac{\partial R_d^e}{\partial E_d} = (1-I)R_A(S)\frac{E_p}{\left(E_p + E_d\right)^2} - c = 0 \tag{1.4}$$

[26]In this section the choice of procedure is treated as an institutional variable and not as a choice variable for the litigants. In the following section, the normative analysis will consider the optimal procedural choice, treating I as an institutional choice variable.

We can verify that $\partial H_1/\partial E_1$ and $\partial H_2/\partial E_2$ are non-zero by explicitly solving for the optimal values of E_1^* and E_2^*. This, in turn, allows us to characterize the litigants' respective reaction functions as:

$$E_p^* = \sqrt{\frac{(1-I)E_d R_A(S)}{c}} - E_d \tag{1.5}$$

$$E_d^* = \sqrt{\frac{(1-I)E_p R_A(S)}{c}} - E_p \tag{1.6}$$

In equilibrium, $E_p^* = E_d^*$ such that:

$$E_p^{**} = E_d^{**} = \frac{(1-I)R_A(S)}{4c} \tag{1.7}$$

For the special, yet most common, case of two litigants, the total expenditure in litigation, at cost C, for the adjudication of the adversarial portion of the award will be given by:

$$L = C(E_p^{**} + E_d^{**}) = \frac{(1-I)R_A(S)}{2} \tag{1.8}$$

This implies that in a symmetric two-litigant case, parties will exert litigation effort in proportion to the value of the adversarial component of the case and the weight assigned to adversarial evidence in the decision-making process. In a purely adversarial system (I = 0) the parties will spend a full half of the value of the case in litigation.

For the more general case of N litigants, it is necessary to distinguish two main cases: (a) N litigants competing for the adjudication of a mutually

exclusive award, where the returns from the adversarial efforts are a proportional share function of the parties' respective efforts;[27] and (b) N litigants litigating as joint actors in a joint or class action claim. In the first case, the individual maximization problem of (1.1) can be recast as:

$$R_i^e = IR_{I(i)}(E_J) + (1-I)R_A(S)\frac{E_i}{\sum_{i=1...N} E_i} - cE_i \qquad (1.9)$$

We can replicate the steps (1.3) through (1.7) to obtain the Nash expenditures in discovery for the general case of N litigants. The individual expenditure in discovery, E_i**, and the total private cost of discovery for the N litigants at unitary cost, C, become respectively:

$$E_i = \frac{(1-I)R_A(S)(N-1)}{cN^2} \text{ and } L = \frac{(1-I)R_A(S)(N-1)}{N} \qquad (1.10)$$

This implies that in the more general case of N litigants with competing claims over a fixed award, a share equal to (N – 1)/N of the value of the adversarial case from the perspective of the parties (i.e., an amount ranging from at least one half and up to the full value of the disputed case) will be dissipated through litigation.

Different results obtain in the case of joint or class actions, where more joint plaintiffs or joint defendants litigate, as a group, for the adjudication of R_A. If the two groups have successfully corrected the collective action problems in pursuing their common cause, then the plaintiffs' and defendants' teams will behave as two individual agents, facing an optimization problem similar to (1.1). Conversely, if the collective action of the various actors is affected by free-riding, the private incentives to litigate may be undermined. Thus the total private expenditures in adversarial discovery may decrease with an increase in the number of joint claimants.

For the general case of multiple litigants with competing claims, we can further study the behavior of the Nash values of aggregate private

[27] Again, the same results hold in a winner-takes-all system where the parties' respective probabilities of success are proportional to their shares of effort.

expenditure L, characterizing it more compactly as:

$$L \equiv C \sum_{i = 1 \ldots N} E_i^{**} = R(I, E_J, R_A, N) \tag{1.11}$$

Having verified that (1.2) and (1.3) are non-zero,[28] we can use the Implicit Function Theorem to study how the equilibrium value of L varies with (i) the institutional weight attached to the inquisitorial findings; (ii) the judicial scrutiny applied to the evidence submitted by the parties; (iii) the value of the disputed case which rests on the findings from the adversarial discovery; (iv) the number of litigants competing for the adjudication of a mutually exclusive award. These calculations, which have been omitted for the sake of brevity,[29] respectively yield:

$$\partial L/\partial I = -H_I/H_E < 0 \tag{1.12}$$
$$\partial L/\partial S = -H_S/H_E < 0 \tag{1.13}$$
$$\partial L/\partial R_A = -H_A/H_E > 0 \tag{1.14}$$
$$\partial L/\partial N = -H_N/H_E > 0 \tag{1.15}$$

where H_E, H_I, H_S, H_A and H_N are the partial derivatives of (1.2) with respect to E_p, I, S, R_A, and N, respectively.

The comparative statics of this problem yield interesting and unambiguous results. The result of (1.12) suggests that the total amount of litigation expenditure rises with an increase in weight accorded to adversarially produced evidence. This should not be surprising, since the evidence that is privately produced in an adversarial system is given more decisional weight and therefore is likely to generate higher returns for the litigants.

Likewise, (1.13) indicates that the parties' total expenditure in discovery is reduced with an increase in the scrutiny used by the judge in the fact-finding process. With an increase in judicial scrutiny, the evidence that is privately produced by the parties is more likely to be discarded and thus yields lower returns. Notice that this result depends on the same level of scrutiny

[28]Similar results are obtained studying the sign of the second derivative of (1.8) which represents the multiple-agent version of (1.2) and (1.3).

[29]These results could be obtained with equal simplicity by inspection of (1.9).

being used with both parties' evidence. A different definition of judicial activism which is not result-neutral may alter our results.

In (1.14) we learn that the expenditure in discovery and litigation is exacerbated by an increase in the value of the case which rests on the findings from adversarial evidence. For pure wealth-maximizers, there will be a straightforward relationship between the value of the case, R_A, and the equilibrium expenditure in litigation. Risk aversion would add a concave curvature to such a relationship. Finally, (1.15) indicates that the total expenditure in discovery increases with the number of litigants competing for the adjudication of a mutually exclusive award. This result is a mere restatement of the explicit relationship between number of litigants and total expenditure, identified in equations (1.10). The total share of the judicial award that is expended in litigation increases monotonically with the number of litigants at a rate (N – 1)/N. Thus, under conditions of symmetry and linear production functions for the litigants, total expenditures would range from a minimum of one half to the full value of the litigated case from the perspective of the parties.[30]

III. TRUTH FINDING, LITIGATION COSTS AND OPTIMAL PROCEDURES

In the previous discussion, we considered the different costs associated with the inquisitorial and adversarial procedures.

Duplication of costs is not the only effect of adversarial procedures. In an adversarial system, the strategic interaction of the parties creates additional costs (and potential benefits) that are not the mere consequence of the uncoordinated efforts of the litigants. In this respect, the claim that the inquisitorial system is more efficient merely because it involves only one searcher of truth (the judge) instead of two or more searchers (the parties and their counsels) overlooks an important dimension of the problem.

The strategic nature of the parties' choices produces a systematic

[30] The result of (1.14) holds only if the N litigants compete for the adjudication of a mutually exclusive benefit. If the various actors litigate a joint claim with a common award, free-riding may undermine their private incentives to litigate. Thus the opposite result $\partial L/\partial N = -H_N/H_E < 0$ may hold if the N actors are litigating a common cause in the presence of free-riding.

discrepancy between the private and social incentives to gather evidence. The parties' (privately) optimal level of discovery and adversarial activity may be inconsistent with the judge's optimal choice of inquisitorial efforts.[31] Since the damage award the parties gain is a zero-sum result, the efforts of the litigants yield offsetting benefits from a private standpoint but may yield positive net benefits from a social standpoint if adversarial evidence contributes to a correct decision. Furthermore, the efforts of the litigants often shed light on the weaknesses and flaws of the evidence presented by their opponents.[32]

The above considerations should be further examined in light of the concerns that public choice theory may raise regarding the judges' ability to identify the optimal level of inquisitorial efforts (i.e., the formidable weighing of costs and benefits of judicial action). We shall proceed assuming that judges attempt to optimize social benefit from correct decisions, and have a varying degree of efficiency, N, in acquiring and processing information.

In this section, I explore the implications of the divergence between private incentives and social incentives in the discovery of a case, extending the previous analysis to additional variables. I treat the choice of the inquisitorial share of the process as endogenous and characterize the optimal level of inquisitorial effort as that which maximizes the net social benefits from litigation. The relevant welfare function, W, includes the social benefits from accurate discovery and adjudication, B,[33] and the social cost of litigation, given

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[31] Most recently, Posner (1999) recognizes this point observing that "privatizing the search (as in the adversarial system) may result in too much or too little evidence from a social standpoint . . . whereas in principle . . . the inquisitorial judge can continue his search for evidence until he reaches the point at which marginal cost and marginal benefit intersect and he can stop right there."

[32] On this point, see also Palumbo (1998) and Posner (1999).

[33]The present model contemplates civil disputes. In extending it to other categories, one should keep in mind that the objective benefit function, B, is likely to differ between civil and criminal cases, in that inaccurate decisions may be socially more costly for criminal cases than civil cases. Thus, *ceteris paribus*, adversarial proceedings may be more appropriate in criminal cases. This conclusion is at odds with the comparative findings of Damaska (1997) who notes that, in spite of its inquisitorial tradition, Continental civil law systems tend to give a relatively greater control to the parties in civil cases, preserving the original inquisitorial approach in criminal proceedings. The author (*id*, at 112) explains this paradox on the basis of the greater

by the sum of the private cost and public cost of the discovery process.

In what follows, I set up the social net benefit function which depends on I, the institutional weight placed on inquisitorial findings, the parties' and judge's levels of effort, and model parameters. I derive I*, the optimal "mix" of adversarial and inquisitorial systems. The stylized representation of the cost and benefit functions allows us to perform comparative statics exercises to study how the optimizing value I* varies with a change in the exogenous variables, such as the level of judicial scrutiny, S, the cost of private production of evidence, c, the efficiency of the judicial system, N, and the social relevance and visibility of the litigated case, V.

I assume that social benefit results from accurate decisions, such as correct interpretations of legislation or proper application of precedent or general principles of law. Social cost is simply the sum of private and judicial costs, so that the problem faced by society in setting the value of I is:

$$\max W = B\,[E_p, E_d, E_J, S, v] - c(E_p + E_d) - C_J(E_J, N) \qquad (2.1)$$

where the effort levels of the parties to the litigation are the Nash equilibrium levels of effort obtained above, and judicial effort is chosen to maximize social welfare.

The benefits from accurate decision making increase directly with the social relevance and visibility of the case. To keep things simple, I have assumed that the administrative and private cost functions do not depend on the social relevance and visibility of the case.

In order to find the optimal level of inquisitorial procedure for our welfare function, we can study the first order conditions of (2.1) with respect to I. Assuming complete symmetry between the two parties to the litigation, we can define:

$$\frac{\partial B}{\partial E_{adv}} \equiv \frac{\partial B}{\partial E_p} = \frac{\partial B}{\partial E_d} \quad \text{and} \quad \frac{\partial E^*_{adv}}{\partial I} \equiv \frac{\partial E^*_p}{\partial I} = \frac{\partial E^*_d}{\partial I}$$

This yields the first order condition:

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need for expeditious adjudication of criminal cases.

$$F = 2\left(\frac{\partial B}{\partial E_{adv}} - c\right)\frac{\partial E_{adv}}{\partial I} + \left(\frac{\partial B}{\partial E_J} - \frac{\partial C_J}{\partial E_J}\right)\frac{\partial E_J}{\partial I} = 0 \qquad (2.2)$$

Notice that since adversarial effort decreases and judicial effort increases as I rises, the two terms in parentheses in (2.2) must have the same sign. In other words, at the socially optimal value of I, either the adversaries and the judge are inputting too much effort from the social perspective, or they are inputting too little effort, or both the parties and the judge are exerting the socially optimal level of effort. To see why this is the case, consider the possibility that the parties are inputting too much effort from the social perspective, while the judge exerts too little effort. The socially optimal level of I could then be increased, resulting in less adversarial and more judicial effort, and thus social welfare would increase.

Under our assumption that the judge exerts effort to maximize social welfare, both terms in parentheses above must equal zero, so that the adversarial parties and the judge input the correct levels of effort from the social perspective. Essentially, our assumption about the behavior of the judge is equivalent to giving the social decision-maker two instruments, I and E_J, instead of just one. Under different assumptions about how judicial effort is set, such as self-serving behavior by the judge or incomplete information about the relevance or underlying truth-value of the case, it is possible that no level of I would achieve optimal effort exertion by the parties and the judge. The level of I would then be set to achieve a second-best solution, in which net marginal social costs from the distortions in the parties' and the judiciary's effort are equalized.

After verifying that $\partial F/\partial I$ is strictly negative, we can assume the existence of the welfare-maximizing value I*[34]. This interior solution indicates

[34] In addition to our assumption about how judicial effort is chosen, we need to assume that $\left|\frac{\partial^2 B}{\partial E_p^2}\right| = \left|\frac{\partial^2 B}{\partial E_d^2}\right| > \left|\frac{\partial^2 B}{\partial E_p \partial E_d}\right|$. This is equivalent to assuming that when one party's level of effort increases, the effect of this change on the marginal social benefit from that party's effort is (negative and) greater in magnitude than the effect of this change on the marginal social benefit of its opponent's effort. This assumption is quite innocuous and insures that social benefit cannot increase indefinitely as any party's level of effort continues to increase.

that neither the pure inquisitorial system nor the pure adversarial system are likely to represent the social optimum. This may explain the gradual convergence of both procedural traditions towards mixed solutions. In common law jurisdictions, for example, the creation of very rigorous rules of evidence constrains the adversarial efforts of the parties and limits the wealth dissipation occasioned by adversarial litigation.[35] In civil law jurisdictions an increasing number of procedural choices are left, as a matter of judicial practice, to the motions of the litigants.

Having determined the existence of a maximum, we can proceed to study the comparative statics of the model. I will invoke the usual assumptions regarding the curvature of the cost functions (increasing marginal costs), and the curvature of the benefit function (decreasing marginal benefits).[36] I assume that all second partials are non-positive, so that the benefit function is concave. Regarding cross partials, I assume that increases in E_p raise the marginal benefit of E_d, increases in E_J raise the marginal benefit of E_p and E_d, and so on. This is because the efforts exerted by the judge and the parties are complementary in the sense that they shed light on the same truth. As the judge expends more effort in fact-finding, he is more likely to find evidence that confirms correct evidence presented by the parties, or negates bad evidence submitted by the parties. Thus, additional judicial effort increases the truth-finding benefit of the parties' effort. Similarly, increases in S cause the marginal truth-finding benefit of the parties' effort to increase. Recall that parties will exert less effort in litigation when S is higher, because their evidence is more likely to be thrown out. Thus, increasing S makes the parties less willing to input effort, even as it makes their efforts more valuable to

[35] Posner (1999) at 17 considers Rule 403 of the Federal Rules of Evidence and hearsay rules as examples of evidence law limiting the cost of discovery in an adversary system. The author further observes that the more limited weight given to party obtained evidence by inquisitorial systems allows greater flexibility in the continental European rules of evidence.

[36] This ensures that the existence of a positive term in the second order condition does not undermine its overall negative sign in the neighborhood of I*, so that the first order condition identifies a maximum in the welfare function (2.1).

society.[37] The level of scrutiny has no effect on the marginal social benefit of additional judicial fact finding, since scrutiny is only directed at the parties' evidence. Finally, I assume that more visibility increases the marginal benefits of the parties' and the judge's effort. This is because mistakes in the formation or application of the law are more costly if they are known to more third parties and can thus affect more future dealings between such parties.

Under these assumptions, I use the Implicit Function Theorem to study how I* varies with the other arguments of the welfare function (2.1). We can start by studying the impact of an increase in judicial scrutiny, S, on the optimal level of inquisitorial proceedings, I*. Given our assumptions we can derive:

$$\partial F/\partial S = \frac{\partial^2 B}{\partial E_p \partial S}\frac{\partial E_p}{\partial I} + \frac{\partial^2 B}{\partial E_d \partial S}\frac{\partial E_d}{\partial I} + \left(\frac{\partial B}{\partial E_p} - c\right)\frac{\partial^2 E_p}{\partial I \partial S} + \left(\frac{\partial B}{\partial E_d} - c\right)\frac{\partial^2 E_d}{\partial I \partial S} \quad (2.3)$$

Since scrutiny increases the public marginal benefit of the parties' effort, and in equilibrium the parties will be exerting socially optimal effort levels, (2.3) is negative. Given that the second order condition is strictly negative, we can determine that:

$$\partial I^*/\partial S = -F_S/F_I < 0 \quad (2.4)$$

This indicates that with an increase in judicial scrutiny, the optimal

[37] In the previous section, we assumed that the parties choose their effort levels independently of the level of judicial effort. In other words, both the parties' and the judge's effort levels depend on I, with opposite signs, but they do not depend directly upon each other. Practically, this is equivalent to assuming that private and judicial expenditures in discovery are strategic substitutes. This assumption is plausible if an increase in judicial inquisition decreases the private returns on the parties' evidence. If we were to assume that judicial and private efforts were strategic complements, lesser weight to adversarial evidence would be necessary to confine the excessive expenditures in litigation. Furthermore, in an adversarial system, sufficiently high coefficients of complementarity may generate total expenditures that exceed the value of the case. In those situations, the participation constraint of the parties would be violated and, given an exit option for the parties, litigation would not be undertaken in equilibrium.

institutional weight attached to the inquisitorial findings should diminish.[38] This result can be explained considering that, in the present context, judicial scrutiny and inquisitorial proceedings are substitutes. Litigants will consider an increase in the weight attached to inquisitorial evidence as qualitatively similar to an increased scrutiny by the court of the evidence they present. In either case, the private discovery of the parties becomes less valuable and the total private expenditures in litigation diminish.

Although this section explicitly considers only two parties to the case, the effect of changes in the number of litigants could be studied by extending (2.1) to include additional parties in both the social benefit function and the private cost function. As N increases, private incentives to engage in litigation expenditures will increase, as found in the previous section. Thus, we would find that the optimal I* increases with the number of litigants, because the marginal social benefit of each party's expenditure falls as all parties spend more.

This suggests that greater reliance should be placed on court-obtained evidence in multiple-litigant cases, given the greater rate of dissipation of private resources in adversarial discovery. As shown in Section II, when more than two parties are competing for the appropriation of a fixed judicial award, the portion of the award that will be dissipated increases relative to the two-litigant case. Thus, an increased weight on inquisitorial evidence in multiple-

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[38] This result is complementary to the common concern that judicial activism risks compromising the outcome-neutrality of the judicial process. *See* Wechsler (1959). *But see* Hasnas (1995) at 201, stating that "[T]he frequent condemnation of the judiciary for 'undemocratic judicial activism' . . . is merely a reflection of the public's belief that the law consists of a set of definite and consistent 'neutral principles' which the judge is obligated to apply in an objective manner . .[even] in the face of overwhelming evidence to the contrary." Hasnas calls this a fiction and labels it "the myth of the rule of law." *Id.* Other scholars share this concern, suggesting that when a judge becomes too enamored with the merits of a case, he may be induced to evaluate the evidence or the legal basis of the case through colored lenses, extending procedural advantages to one party or giving lesser weight to the evidence provided by the opposing party: "the deference accorded admissibility determinations and the existence of inconsistent rules regarding the admissibility of certain [social science] theories allows judges leeway to engage in judicial activism." Because "many social science theories generally favor one side," a judge with a personal bias can make results-oriented admissibility decisions. Etlinger (1995) at 1278.

party cases will minimize the social cost of litigation.

This result does not apply to the case of joint or class actions, where the multiple plaintiffs – having coordinated their collective action – should be viewed as a single entity, keeping N invariant. Likewise, this result does not apply (and the normative conclusions may indeed be reversed) for the case of multiple joint litigants with imperfect internal coordination. In this latter case, free-riding may indeed affect the private incentives to procure evidence, and a lower value of I (and consequential greater value of the "adversarial case") may be necessary to offset the diminished private incentives.

Additionally, we allowed only the private expenditure in litigation to vary with the number of litigants. If the administrative costs of adjudicating multiple-party cases were to increase at a faster rate than the total private costs of discovery, our result would no longer hold.

Proceeding in our analysis, we can study the effect of a change in the private cost of discovery and litigation on the choice of the optimal amount of inquisitorial procedures.

$$\partial F/\partial C = -\left(\frac{\partial E_p}{\partial I} + \frac{\partial E_d}{\partial I}\right) > 0 \qquad (2.5)$$

Hence:

$$\partial I^*/\partial C = -F_C/F_I < 0 \qquad (2.6)$$

The results in (2.6) suggests that more reliance on court-obtained evidence should be placed with an increase in the private cost of discovery and litigation for the parties. In this case, higher private costs will reduce the privately optimal choice of discovery, and will also reduce the socially optimal level of litigation effort by the parties. Contrast this with a case in which private litigation costs are higher but this does not increase the social cost of litigation. For example, richer individuals have a higher value of time and thus it is more costly for them to pursue litigation. Nevertheless, the social cost of their time may not be greater than that of poorer individuals. In such a case, our results could be reversed. A lower value of I may become necessary to offset the diminished private incentives to procure evidence.

This result raises a question as to whether the judicial process is likely to become increasingly biased in favor of the rich against the poor. In general

this may not be the case, once the mixed procedural system that results from equation (2.2) is compared to its alternatives. A pure adversary system depends to a much greater degree on effective advocacy.[39] The market for legal services ensures that those who are able to pay higher professional fees can attract more effective advocates.[40] A procedure which gives lesser weight to the adversarial efforts of the parties will, at the limit, facilitate access to the justice system for indigent individuals.

In the present model, the adversarial share of the judicial award, R_A, depends only on the procedural variable S, denoting judicial scrutiny of evidence presented by the parties. If the adversarial portion of the judgment was allowed to vary autonomously, an additional partial derivative would be necessary to study the effect of a change in R_A on the optimal choice of the institutional variable, I. The results would be quite intuitive. An increase in the value of the unsettled portion of the litigated case, R_A has an impact on the Nash levels of efforts found in (1.7). Given the presence of R_A solely in the numerator of the Nash values, a greater use of inquisitorial proceedings may be appropriate with an increase in the value of R_A. The result is consistent with the fundamental idea that the value of the rent dissipated through litigation is proportional to the value of the unsettled portion of the dispute.[41]

Analogous, unambiguous, results can be reached with respect to the other exogenous arguments of (2.1). I begin by considering the effects of notoriety, visibility and the social, political, or moral importance of the

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[39] "In our adversary system the strength with which each side is able to present its case depends in large part on the freedom to ascertain and present to the trier of fact all relevant evidence." van Kessel (1992) at 420.

[40] The market for legal services can also provide "litigation-biased expert witnesses that American lawyers recruit and pay to bolster preordained results." Langbein (1988) at 764.

[41] An increase in the value of R_A, however, may be correlated to the general visibility of the case, V. This may create some indeterminacy in our results. High stake cases, being more visible by the general public, could benefit from a more adversarial procedure, insofar as such procedure makes the tribunal better informed about the case and therefore increases the likelihood of a correct decision. Thus, high stake cases may justify greater litigation expenditures given the greater social benefits of a correct decision. The point was noted by Judge Richard Posner whose comments on an earlier draft have been very valuable for the development of this section.

disputed issue, V. The effect of an increase in the visibility and social relevance of the case, V, on the optimal level of inquisitorial proceedings, I*, can be studied by finding $\partial F/\partial V$. If we assume that $\partial E_{adv}/\partial I$ and $\partial E_{adv}/\partial I$ do not depend on V, we obtain:

$$\frac{\partial F}{\partial V} = 2\frac{\partial^2 B}{\partial E_{adv}\partial V}\frac{\partial E_{adv}}{\partial I} + \frac{\partial^2 B}{\partial E_J \partial V}\frac{\partial E_J}{\partial I} \qquad (2.7)$$

Given our assumptions about the signs of cross partial derivatives and the effect of changes in I on the effort levels of the parties and the judge, the sign of (2.7) is theoretically ambiguous. This sign depends on whether visibility makes the parties' or the judge's effort relatively more beneficial to society. If, for example, we assume that the cross partial derivatives in (2.7) are roughly of the same size, then we would obtain:

$$\partial I^*/\partial V = -F_V/F_I < 0 \qquad (2.8)$$

In other words, since visibility increases the marginal benefits from both the parties' and the judge's efforts, but lowering I increases the parties' effort more than it diminishes the judge's effort, the optimal level of I falls when visibility increases. Note that an increase in the visibility of the case affects the benefits from accurate adjudication. High profile and notorious cases have a greater impact on the general community. The accuracy of the adjudication process is thus more critical in such cases. The social sense of justice may be more seriously offended by the wrongful decision of a publicly known case. In addition, the creation of an erroneous legal rule can affect the incentives of private parties to invest or to enter into beneficial contracts. Due to the importance of precedent in many legal systems, incorrect rules formulated by the court tend to cause persistent error in the adjudication of other cases. Many of these adverse effects of wrong decisions are exacerbated by high visibility and publicity. The reader should note that the current model treats visibility, V, as analytically independent of R_A, which represents only the portion of the case the adjudication of which rests on the adversarial evidence provided by the parties. By relaxing this simplifying assumption, and creating some interaction between the visibility of the case, V, and the value of the unsettled share of the judgement, R_A, more ambiguity in signing (2.7) would be generated.

A similar conclusion holds with respect to cases involving important moral, political or social issues. An increase in the moral or social importance of the litigated issue increases the importance of an accurate adjudication. To the extent that a precise assessment of the factual circumstances is relevant for the outcome of such issues, the accuracy of the discovery and adjudication process becomes more critical in the resolution of this group of disputes. Put differently, the forward-looking function of judicial decision making may be more seriously compromised by the wrongful decision of a politically or socially important issue.

An alternative interpretation of (2.8) would consider the different benefits associated with accurate adjudication in criminal and civil cases. Higher competition in providing evidence and greater adversarial scrutiny of the evidence offered by the other party lessen the possibility of convicting an innocent person and increase the possibility that the guilty may escape conviction. By keeping the barriers to conviction high, as mandated by the adversary system, the costs associated with wrongful convictions are minimized. As observed by Damaska (1983), where this is recognized, proponents of the adversary system accord decisive weight to liberal values. Type I and Type II errors in adjudication are regarded as having socially different costs, thus making it preferable to let a larger number of the guilty go free than to convict a smaller number of innocent persons.[42]

The above argument explains the stronger emphasis on adversarial proceedings in criminal rather than civil cases. Unlike the criminal law scenario, Type I and Type II judicial errors have symmetric social costs in most civil law disputes. Assuming non systematic bias, errors of either type only bring about a transfer of wealth between the litigants and the incentives of the parties remain unaltered. If litigants are risk averse, some social loss is occasioned due to the parties' uncertainty, and such loss would have to be balanced against the additional litigation costs that would be induced by a greater use of adversarial proceedings.

Finally I consider the effect of a change in N, the parameter measuring judicial efficiency in fact-finding, on the optimal level of inquisitorial proceedings, I*. In this case the result is straightforward. The variable N captures the direct and indirect changes in the administrative cost of non-adversarial discovery. N actually denotes the level of administrative

[42] For further analysis, see Damaska (1983) at 26.

inefficiency: higher levels of N imply higher marginal social cost of judicial discovery. The effect of a change in N on the choice of optimal level of non-adversarial discovery, I*, can be studied by deriving:

$$MF/MN = - \frac{\P^2 C_J}{\P E_J \P f} \frac{\P E_J}{\P I} < 0 \qquad (2.9)$$

This means that:

$$MI^*/MN = ! F_N/F_I < 0 \qquad (2.10)$$

This indicates that more non-adversarial discovery may be appropriate with an increase in the efficiency of the courts in the procurement and evaluation of evidence, other things being equal. The last result is self explanatory. If the court system has a comparative advantage in the use of specialized technology or information, greater court involvement in the discovery process may be desirable.[43] Conversely, if the specialized or trade-specific nature of the evidence renders the judicial involvement too costly or inefficacious, greater reliance on the adversarial efforts of the litigants may be appropriate.

IV. COSTS OF THE ADVERSARIAL SYSTEM

While practitioners from both civil and common law jurisdictions appear to be content with their procedural system, legal scholars continue their debate on the theoretical and policy implications of alternative discovery systems. Comparative scholars suggest that inquisitorial and adversarial systems have gradually converged towards mixed solutions, but procedural differences still remain marked. In the intellectual debate, different rationales have been invoked in support of one or the other procedural systems, including

[43] Consistent with this predicament, Erichson (1999) examines recent developments in mass tort litigation, suggesting that there has been an evolutionary shift in the direction of inquisitorial justice systems such as those of certain civil law countries. Court-appointed experts and judicial inquiry into settlement class actions resemble inquisitorial tools.

private autonomy of the litigants and historical tradition (for the case of adversarial procedure), and neutral truth-finding and economy in adjudication (for the case of inquisitorial procedure).

Adversarial civil procedure is viewed as consistent with the principles of personal liberty and equality that so strongly permeate the American ideal of justice,[44] and is often lauded as vital to the protection of American democracy and freedom.[45] According to Damaska (1983), the adversary system is lauded because of its competitive style of presenting evidence and argument, which is thought to produce a more accurate result than its inquisitorial alternative, with the judge monopolizing the discovery process. Along similar lines, Hazard (1978) observed that a judge who is involved in the discovery process can hardly keep an open mind and lacks sufficient incentives to do a proper job in the finding of facts.[46] In this setting, firm adherence to the adversarial approach is viewed as the best antidote against possible invasions of the personal autonomy of the parties by the constituted judicial authority.[47]

In this setting, it is often believed that the contrast between the adversarial and the inquisitorial procedural systems stems from two antithetic views about the role of government in society, contemplating, respectively, a "reactive" and a "proactive" system of government.[48] According to this view of the adversarial proceeding, the judge should come into action only to resolve disputes between the contending parties.

This paper has examined some of the features associated with adversarial judicial process, contrasting it with the results obtained under the non-adversarial procedure adopted in the civil law tradition. The results obtained in Part II and III of this paper challenge the common idealization of

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[44]Hazard and Taruffo (1993) at 101.

[45]For a more extensive discussion of the merits of the adversary system, see Hazard and Taruffo (1993) at 101-04.

[46] See Hazard (1978) at 121.

[47] See the Jackson opinion in *Hickman v. Taylor*, 329 U.S. 495, 516 (1947).

[48] See, e.g., Goldstein (1974).

adversary procedure.[49] The arguments in favor of the adversary procedure analogize the efforts of the litigants to the competition that takes place in the market for goods. The analogy between the adversary procedure and a competitive market, however, underestimates the rent-seeking dynamic of the litigation process.

For the most part, litigants compete over the division of a fixed resource (represented by the value R_A in our model). Unlike the efforts of two competitors in the marketplace, the efforts of two litigants are not capable of increasing the value of the litigated asset, R_A, and often cause a dissipation of a good portion of its net value. Indeed, the analogy between the adversary procedure and a competitive auction fails to consider the fact that, unlike an auction (in which only the highest bidder is bound to pay), litigation creates positive rent-seeking costs for each litigant. In litigation, each party has to bear the full private cost of his or her rent-seeking activity, even though only the prevailing party captures the residual value of the litigated asset, R_A. In this respect, the analogy should be revisited in light of the rent-seeking element of real world litigation. A more appropriate analogy could be drawn between litigation efforts and the advertising efforts of two competitors. Most advertising expenditures, presumably, are mutually offsetting, just like most litigation expenditures in an adversary system. Indeed, we could argue that litigation expenditures are to judicial decisions as advertising expenditures are to consumer decisions.

As illustrated earlier, the rent-seeking analysis unveils an important characteristic of the adversarial system, namely the exacerbation of the incentives for rent dissipation through litigation. The paper suggests that the adversary system conduces rent seeking because the expenditures of each party are determined by the private rather than the social cost of winning. The comparative statics of the problem reveal that the rent dissipation problem is exacerbated with an increase in the value of the unsettled component of the disputed case, and an increase in the number of litigants with competing claims on a fixed award. Conversely, the dissipation is reduced with an increase in the involvement of the judge in the fact-finding process. The judge who gathers the facts soon comes to know the case as well as the involved parties, and will be

[49]See also Sward's (1983) "demystifying" of the adversarial ideology, in which she endorses a more inquisitorial approach as a means of increasing the efficiency of American adjudication.

able to concentrate its subsequent fact-finding efforts toward more important and still unresolved factual issues. As shown in this paper, the weight attached to the adversarial discovery affects the degree to which parties' efforts can influence the outcome of the case. Thus, the judge's direct involvement in the fact-finding has obvious implications for procedural economy, reducing the marginal incentives for the parties' adversarial efforts, and possibly facilitating the settlement of the case.

In this context, several arguments can be formulated to complement the classical hands-off approach to adjudication. Just as legal systems play an important role in correcting economic market failures, so a judge may play a valuable institutional role in redressing the rent-dissipating competition of the parties during a trial.[50] This conclusion poses the difficult question as to how far the judge can go in his intervention without negatively affecting the incentives of the litigants and the successful functioning of the adversary system.[51]

Undoubtedly, in a world characterized by contentious litigation and discovery, the minimization of the rent-seeking component represents only one argument in a more complex social welfare function. The normative analysis of this paper has examined some trade-offs between the costs and benefits of adversarial discovery and litigation. Most importantly, adversarial efforts may have a direct social value, insofar as they make the tribunal better informed about the case and therefore increase the likelihood of a correct decision. The social benefits from accurate decision making may further vary with the degree of visibility of the case and the social or political relevance of the litigated issue. Likewise, the private and social costs of litigation may be affected by a change in the relative costs of discovery for courts and private litigants.

The analysis could usefully be enriched by other important institutional considerations in order to yield a valid assessment of the respective merits of each procedure. For example, rent-seeking expenditures will be factored in the parties' decision to pursue litigation. The more costly litigation is, the less of it there will be. If there are negative externalities, from high levels of litigation, rent-seeking expenditures would generate a social benefit, given the reduction in the number of litigated cases. Furthermore, it is conceivable that the parties'

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[50] For further discussion, see Fuller (1961) at 41.

[51] For a more extensive discussion, see Damaska (1983) at 25-6.

acceptance of the judgment is facilitated where the parties are permitted to exercise greater control over discovery and procedure.

These theoretical results should be further examined in light of empirical data. Most of the empirical studies compare the efficiency of the adversary system with the inquisitorial alternative by testing the relative efficacy of those procedures in overcoming the decision-maker's bias and inducing reliable truth-finding.[52] Additional empirical evidence will be necessary to test the predictions of this paper regarding the different levels of litigation expenditure under the two procedural regimes.

One final consideration, which has been only briefly sketched in the preceding analysis, should examine the conditions under which an adversarial procedure guarantees an equal and effective representation to the parties. The conclusions of this paper should not be read to endorse *ad hoc* balancing between the inquisitorial and adversarial components of the process as a way to compensate for parties' differential wealth or access to legal representation. In cases involving indigent individuals, it may be better to pursue equal access to justice through counterbalancing procedures other than an increased role for judges in discovery. Given the availability of more neutral and cost-effective means for promoting equal representation, the determination of the optimal level of inquisitorial efforts should be based on the objective values indicated above and should not be influenced by the need to provide legal aid to unrepresented parties.

[52] Those studies often suggest that, since the adversary model requires the judge to listen passively to both sides of the case before making a decision, he would be less likely to become prematurely biased and draw a conclusion too early. See Damaska (1983); Thibaut and Walker (1975); Sheppard and Vidmar (1980)

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