EFFICIENT PROCEDURE

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An important debate is now underway concerning the best or ideal system of procedure for resolving legal disputes. This fundamental issue has recently manifested itself in debates concerning adversary versus inquisitorial procedures, the content of due process, and suggestions to import various European procedural systems. In all these debates one important and recurring theme is the question of comparative cost or efficiency. Almost without exception, a substantial degree of party control has been condemned as extravagant, and an activist decisionmaker has been seen as the necessary remedy. The application of generally accepted economic principles regarding the cost of party participation and decisionmaker intervention, however, shows that the critics' judgment is unfounded. Specifically, they have ignored imposition costs, a major component in the procedural cost analysis, and this has caused their conclusions to place an unwarranted emphasis on autocratic decisionmaking systems. In fact, the only certain remedy for inefficiency is to introduce the opportunity for disputing parties to choose a decisionmaking model that best fits the characteristics of their particular controversy.

Perhaps the most common form of the basic issue is the question whether an adversary or an inquisitorial procedure is more desirable.²

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I. For discussion of imposition costs, see text accompanying note 27 infra.

Proponents of the adversary system contend that issues of fact and law are more thoroughly and impartially considered by the decisionmaker within a procedural context that delegates control of the development and presentation of evidence to the parties in the dispute.\textsuperscript{3} They argue that the development of the lawsuit should be left largely to the professional judgment of opposing lawyers, with the judge fulfilling the role of an umpire. On the other hand, those supporting the inquisitorial model argue that adjudication is more successful if the decisionmaker is empowered to develop evidence in order to assess the validity of the respective litigant's claim.\textsuperscript{4} They insist that the trial judge must be the affirmative manager of litigation with the stated responsibility to determine a just result.

Almost without exception, critics of the adversary system have judged that model unacceptable according to economic criteria. Chief Justice Burger, speaking on criminal justice, called the present proce-

dural system "inefficient and wasteful."\textsuperscript{5} Boyer, writing about complex disputes, found current adversary trial procedures "undeniably an expensive means of deciding polycentric issues."\textsuperscript{6} Verkuil called the adversary system inappropriate for disputes concerning public property because "adversary procedures are usually too 'expensive.'"\textsuperscript{7} Rosenberg said the adversary model is inadequate for small claims because it involves "costly clumsiness."\textsuperscript{8}

The debate about an ideal procedure has also been framed in

\textsuperscript{3} See J. THIBAUT & L. WALKER, supra note 2, at 28; Adams, The Small Claims Court and the Adversary Process: More Problems of Function and Form, supra note 2, at 543; Adams, Towards a Mobilization of the Adversary Process, supra note 2, at 576; Fuller, supra note 2, at 38-39; Millar, supra note 2, at 18; Thibaut, Walker & Lind, supra note 2, at 400-01.

\textsuperscript{4} See A. EHRENZWEIG, supra note 2; P. BRETT, supra note 2; Brett, supra note 2, at 191; Frankel, The Adversary Judge, supra note 2; Frankel, The Search for Truth: An Umpireal View, supra note 2, at 1052-59; Frankel, From Private Fights Toward Public Justice, supra note 2, at 522. See generally Pound, supra note 2.

\textsuperscript{5} McDonald, A Center Report/Criminal Justice, CENTER MAGAZINE, Nov. 1968, at 69 (quoting remarks by Chief Justice Burger at Center for Study of Democratic Institutions).


\textsuperscript{7} Verkuil, The Ombudsman and the Limits of the Adversary System, 75 COLUM. L. REV. 845, 853 (1975).

\textsuperscript{8} Rosenberg, Devising Procedures That Are Civil to Promote Justice That Is Civilized, 69 MICH. L. REV. 797, 814 (1971).
EFFICIENT PROCEDURE

1979] 363

terms of the recent controversy over the appropriate content of
procedural due process as guaranteed by the United States Constitution.9
This topic was brought to the forefront by a series of landmark cases,
beginning with Goldberg v. Kelly,10 in which the Supreme Court and
numerous lower courts have sought to clarify and prescribe the specific
content of a fair procedure. The focus of these cases is on the right to
such procedural features as notice, a hearing, and cross-examination,
but the contribution of such features to a fair process can only be re-
solved according to a concept of the best or ideal system of legal deci-
sionmaking. Thus debate about the content of procedural due process
necessarily involves more general questions concerning decisionmaking
procedures, because claims of right to particular mechanisms must be
measured according to a standard.

Here also, the debate has frequently included judgments about
efficiency, and, generally, the mechanisms that enhance party participa-
tion have been judged too expensive. Mashaw, writing about due
process in administrative decisionmaking, questioned use of an adver-
sary model because "[t]he costs of such an adversary procedure proba-

9. Davis, The Requirement of a Trial-type Hearing, 70 HARV. L. REV. 193 (1956); Friendly,
Some Kind of Hearing, 123 U. PA. L. REV. 1267 (1975); Johnson, Denial of Self-help Repossession:
An Economic Analysis, 47 S. CAL. L. REV. 82 (1973); Mashaw, The Management Side of Due
Process: Some Theoretical and Litigation Notes on the Assurance of Accuracy, Fairness, and Timeliness
in the Adjudication of Social Welfare Claims, 59 CORNELL L. REV. 772 (1974); Mashaw, The
Supreme Court's Due Process Calculus for Administrative Adjudication in Mathews v. Eldridge:
Three Factors in Search of a Theory of Value, 44 U. CHI. L. REV. 28 (1976); Rubenstein, Procedu-
ral Due Process and the Limits of the Adversary Model, 11 HARV. C.R.-C.L.L. REV. 48 (1976);
Scott, Constitutional Regulation of Provisional Credit Remedies: The Cost of Due Process, 61 VA. L.
REV. 807 (1975); Scott, The Reality of Procedural Due Process—A Study of the Implementation of
Fair Hearing Requirements by the Welfare Caseworker, 13 WM. & MARY L. REV. 725 (1972);
Verkuil, A Study of Informal Adjudication Procedures, 43 U. CHI. L. REV. 739 (1976); White, The
319 (1976).
the Assurance of Accuracy, Fairness, and Timeliness in the Adjudication of Social Welfare Cases,
supra note 9, at 789.
12. Cramton, A Comment on Trial-type Hearings in Nuclear Power Plant Siting, 58 VA. L.
REV. 585, 590 (1972).
protect against unnecessary and costly trial-type hearings."

A third focus for the procedural debate is provided by the work of comparativists who have sought to contrast the American adjudicatory mechanism with that established in other countries, particularly European countries. Typically this work includes recommendations for the importation of various European models for decisionmaking that, it is claimed, will improve legal decisionmaking in the United States. For example, it is often proposed that American courts follow the English example and eliminate the civil jury, and the activist role of the continental judge in developing the evidence in criminal cases has received much support. Since these features are key aspects of larger systems, the proposal to borrow such features is in part an argument to discard the present ideal for another.

The concern about cost is echoed by the comparativists who have frequently judged the American judicial system unfavorably on the criteria of efficiency and have urged the adoption of European models said to be more economical. Reiss advocated more emphasis on pre-trial procedures, a more active role for the trial judge and the use of court-appointed experts, arguing that the end result will be to promote the "efficient administration of justice." Likewise, Kaplan compared American and German civil procedure and found the German procedure to be less costly per litigant than the American counterpart. In his judgment the American procedure "tends toward expense."

But is it true that party-dominated dispute resolution is almost always too costly? Is an activist decisionmaker almost always more efficient? It is doubtful that this is the case. The use of generally accepted economic principles suggests a major qualification and refinement of the critics' position regarding the cost of party participation and decisionmaker intervention. In making this argument we employ the premise that the distribution of control among the participants in conflict resolution is the key factor in determining the significant character of any procedural system. Control in this sense has two major components: control over the decision, the degree to which any participant can unilaterally determine the outcome, and control over the process

15. Reiss, supra note 14, at 108.
EFFICIENT PROCEDURE

whereby the parameters of the conflict are established and information is developed. From this premise, the next step is to accept the general framework of procedural analysis proposed by Thibaut and Walker\textsuperscript{17} wherein procedural systems may be related to each other along a double aspect control continuum that is anchored at one end by an idealized bargaining model (with absolute process and decision control in the disputants) and at the other end by an idealized autocratic procedure (with absolute process and decision control in a third party not involved in the original conflict). Other familiar, simple procedural models may be located on the continuum, in order from the bargaining end point, as follows: mediation, moot, and arbitration. The relative location of these simple models merely illustrates the nature of the continuum; it is important to note that all procedural models, including very complex models, can be located along this double aspect continuum. For example, the adversary model employed in American trial courts would be located near the simple arbitration model, and the ideal inquisitorial model employed by many continental trial courts would be located very near the autocratic end point. Similarly, a resolution process incorporating features associated with procedural due process, such as notice, a hearing, and cross-examination, vests greater process control in the litigants and would consequently be located more toward the bargaining end point of the continuum than would a process in which the method for presenting evidence was left to the discretion of the decisionmaker.

I. A PROCEDURAL BENCHMARK

Our argument begins with the proposal that bargaining be adopted as a benchmark procedure by which the quality of all other procedures may be judged. A market economy, operating under certain stringent assumptions, serves to allocate resources in such a way that the needs and desires of the members of society are maximized and no other allocation of resources can increase the welfare of one person without another being made worse off. This result is generally known as \textit{pareto optimality}. The price system in the market economy facilitates the trading or bargaining process by which efficient allocation is achieved,

and it can be shown that a price system with perfectly competitive markets can achieve an equilibrium allocation that is welfare maximizing.\textsuperscript{18} Thus it is generally accepted that the bargaining model of interaction can confer gains from exchange to all parties and, under certain assumptions, will achieve a \textit{pareto optimal} allocation. When breakdowns in these assumptions occur, as is common in a complex society, rationales for third-party intervention (usually government) are created in order to reestablish the equilibrium solution.\textsuperscript{19} These simple aspects of bargaining have been long established, but they have often been overlooked in analysis of legal procedure.\textsuperscript{20}

Bargaining theory can be applied beyond the traditional market setting to many different types of traditional legal conflicts to determine an optimal solution between parties. A typical dispute will often have many different possible outcomes or solution sets. If one of these solutions in a given dispute is \textit{non pareto optimal}, that is, there are other solutions that both parties will prefer, bargaining can result in an efficient or \textit{pareto optimal} resolution. Parties bargaining in a rational manner will avoid certain settlements when others exist that would make them both better off. The classic action of land partition can provide a good example. Suppose that prior to the division the property has a fair market value of $100,000. One division, which would ensure that both parcels are suitable for development (in terms of shape, terrain, access, and so forth), will result in each half being valued at $50,000. Another division would leave one half with no flat terrain suitable for development and the other with no access to a public road. These parcels would be expected to have a lower value, say $30,000.


\textsuperscript{19} This is the concern of welfare economics. For more details, see C. Ferguson, \textit{Microeconomic Theory} 478-501 (1972); J. Quirk & R. Sapossnik, \textit{Introduction to General Equilibrium Theory and Welfare Economics} 103-47 (1968); Bator, \textit{The Anatomy of Market Failure}, 72 Q.J. Econ. 351 (1958). This mode of analysis is also evident in Schultze, \textit{The Public Use of Private Interest}, Harper's, May 1977, at 43.

\textsuperscript{20} The cost minimizing goal for procedure has been discussed in R. Posner, \textit{Economic Analysis of Law} 333-56 (1972), in Posner, \textit{An Economic Approach to Legal Procedure and Judicial Administration}, 2 J. Legal Stud. 399 (1973), and also in J. Buchanan & G. Tullock, \textit{The Calculus of Consent} 97-116 (1962). Posner's goal for a procedural system is to minimize the sum of the administrative cost of running the system and the error cost of a wrong decision. This is a somewhat narrow view of cost because there are other costs and other considerations involved in conflict resolution. See text accompanying notes 23-29 infra. In addition, Posner does not consider the probable economic effects of choosing one model of procedure instead of another, but rather examines, according to his criteria, various aspects of a single model that is currently employed in courts of general jurisdiction in the United States.
defining the problem, resolving incidental matters, and working out a common set of rules for the bargaining process (if not predefined). Negotiation costs may also include the investment in strategic behavior and tactics by the parties.25

The magnitude of these costs will vary with several key factors including the number of parties involved, the complexity of the issues, the size of the potential gain, and the intensity of the parties' preferences. The greater the intensity of preferences, range of bargaining, complexity of issues, or numbers involved, the higher will be the transaction costs of reaching an agreement. As these costs increase, the likelihood of achieving a bargaining solution is diminished. In particular, if transaction costs for any party are greater than or equal to expected gains, the incentive to bargain disappears completely.

Transaction costs can be reduced by adding a third-party participant and giving that party process control, decision control, or both. Identification costs may be significant if there are potentially many parties to the conflict or if the nature of the conflict is such that it is difficult to identify all the relevant parties or get them to the bargaining table. An institutionalized third party can greatly reduce these costs by centralizing the effort to identify all parties and bring them to the bargaining table, rather than requiring all parties to do this on their own, which would only result in duplication of effort and an attendant increase in cost. Likewise, information costs may be lowered through the pooling of information or actual gathering and dispensing of information by a third party. Presumably, if there exist incentives to negotiate, there also exists the incentive to accumulate the necessary information. If, however, such information is not readily accessible or if it is very costly to obtain for one or all parties, third-party control may substantially lower transaction costs.26

The costs of negotiation can be quite variable. Assuming that all parties are identified and the requisite information is available, the parties must actually sit down and negotiate. This can involve specifically


25. Strategic behavior is modeled in game theoretic terms. Its main applications to date have been in the area of oligopoly behavior and labor-management negotiations. See L. Fouraker & J. Siegel, Bargaining Behavior (1963); C. Stevens, Strategic and Collective Bargaining Negotiations (1963); Tideman & Tullock, A New and Superior Process for Making Social Choices, 84 J. Political Econ. 1145 (1976).

26. The problems of information imbalance and bias are discussed under the heading "Equity" in section II.C. of the text.
defining the problem and the major and minor areas of concern, the
time and resources invested in exchange of offers and counteroffers
and, perhaps most importantly, the time and resources invested in
strategy and tactics. Negotiation costs will rise with greater numbers
involved in the conflict and with the complexity of the conflict situation
because agreement will be more difficult and time consuming to obtain.

In addition, the propensity of individual parties to invest time and
resources in bargaining, especially strategic bargaining, will rise both
with the intensity of preferences and with the size of potential gains.
Intense preferences or large potential gains can lead to attempts to con-
ceal true preferences or not to convey all the necessary information in
order to secure a greater share of potential gains from trade. Such in-
vestment in strategic bargaining may greatly increase the time and re-
sources used in conflict resolution or even preclude a resolution of the
conflict. Although the parties may be aware of the increased costs, and
thus the reduced net benefits, of strategic bargaining, if the potential
gains from trade are sufficiently large the incentive for such investment
is strong.

The introduction of a third party may be used to reduce the invest-
ment in strategic bargaining. The third party could clarify, narrow, or
subdivide the dispute in order to make it more manageable or to reduce
the bargaining range. The third party could also point out the high
costs associated with strategic bargaining in order to induce less costly
strategic behavior. In cases involving a high degree of conflict of inter-
est, where the range of mutually beneficial solutions is small and the
possibility of deadlock is relatively great, the adoption of a procedural
model with third-party decision control will avoid high, possibly infi-
nite, transaction costs.

This is not to suggest that the presence of transaction costs should
automatically trigger the intervention of a third party to impose a reso-
lution on the disputants. In the real world, transaction costs are in-
volved in every dispute or bargaining session to some extent; they are
always present to act as a disincentive to the bargaining process. Reso-
lution processes toward the autocratic end of the procedural continuum
can also be burdened by significant transaction costs that must be con-
sidered when choosing an optimal procedure. Furthermore, the institu-
tion of a third-party decisionmaker will generate additional cost on the
parties if a nonwelfare maximizing solution is imposed. The potential
for this kind of error is increased as process and decision control shifts
EFFICIENT PROCEDURE

page 367

1979

We have argued that bargaining will be the best procedure, provided certain key assumptions obtain. According to bargaining theory, allocations that deviate from the pareto optimal solution are the result of a breakdown of one or more of the assumptions upon which the efficient functioning of the market economy depends. It follows that the breakdown of one or more of the assumptions constitutes a sufficient reason in the legal process to move elsewhere on the procedural continuum and adopt a system different from the bargaining benchmark. The new model should be chosen according to the character of the failed assumption or assumptions, and a rule of parsimony should be followed so that the adopted model deviates from the benchmark procedure in only those respects necessary to remedy the failed assumptions and restore, as much as possible, the benefits of the bargaining system. These proposals lead us to consider the optimal role of other procedural models by discussing in more detail the assumptions

II. BREAKDOWN OF ASSUMPTIONS

Of course, not every conflict will have the potential negative-sum quality of the land partition example above. Some disputes will have no solution that both parties find inferior to another. Parties with highly individualized preferences, however, are likely to be particularly wary of the intervention of a third-party decisionmaker. This condition is best exemplified by the division of an estate in which there is property involved with uncertain market value or to which a party may attach a sentimental value higher than that dictated by the market (for example, a pet or a family heirloom). Since each party best knows his relative preference for each item in dispute, a division can be worked out that will most efficiently allocate each piece of property. In these cases, bargaining is much more likely to maximize both individuals' preferences than would a settlement imposed by a third party who could not be expected to assess such nonquantifiable and unpredictable preference factors as sentimental attachment. As a result of individualized preferences, conflict resolution again becomes a positive-sum game in which welfare can be maximized through exchange by the parties.
necessary for efficient bargaining, the situations in which they are likely to break down, and the range of procedures appropriate to achieve an efficient solution.

A. Transaction Costs

The attainment of an equilibrium solution to the bargaining problem assumes the absence of significant transaction costs; yet bargaining is not a costless enterprise and always involves an investment of some time and resources by all parties. In conflict situations, the parties must meet, agree on the nature of the conflict, gather relevant information, and spend time and money in the bargaining process.\(^{21}\) The presence of high transaction costs can lead to an overinvestment in bargaining so that the bargaining solution will not be efficient (in terms of cost minimization),\(^{22}\) and a third party may be necessary either to limit the range of bargaining, and thus the investment in bargaining, or actually to impose a solution when none can be attained by bargaining.

Transaction costs associated with bargaining can be divided into two major categories: prenegotiation costs and negotiation costs.\(^{23}\) Prenegotiation costs include such factors as identifying the causes of conflict and all the parties involved in the conflict, getting the parties together to negotiate, and acquiring the necessary information upon which to bargain. These information costs consist of the time and expense of gathering information and can include specialized help in the form of lawyers or technical experts if the nature of the problem warrants such help.\(^{24}\) Negotiation costs include the actual exchange of offers and counteroffers in bargaining and also the costs involved in


\(^{22}\) Transaction costs may preclude a solution if they are too high or, as J. Buchanan & G. Tullock, *supra* note 20, at 99-103, point out, the presence of high transaction costs may lead to an overinvestment in bargaining as the parties attempt to achieve a solution.

\(^{23}\) A third category, the cost associated with the maintenance or enforcement of the provisions of an agreement, can also be considered a transaction cost associated with bargaining, but will not be treated in this article since our main concern is with the process of conflict resolution and not the durability of the final agreement.

\(^{24}\) Information is usually assumed to be costless in perfectly competitive markets. As emphasized by J. M. Keynes, however, it can be a significant barrier to full employment. See J. Keynes, *The General Theory of Employment Interest and Money* (1936); *Microeconomic Foundations of Employment and Inflation Theory* (E. Phelps ed. 1970). For a further discussion of the impact of information costs, see especially Alchian, *Information Costs, Pricing, and Resource Unemployment*, in id. at 27, and Holt, *Job Search, Phillips' Wage
to a third-party decisionmaker because there is an increase in the opportunity to impose a solution contrary to the best interests of the disputants. The cost of such non pareto optimal decisionmaking is termed "imposition cost" since it results from an imposed rather than an independently bargained outcome to a dispute.\(^\text{27}\)

Buchanan and Tullock have recognized an analogous cost associated with the shift from individual to collective or governmental decisionmaking.\(^\text{28}\) Their analysis, built on an individualistic postulate of human behavior, concludes that under certain conditions an individual will prefer an activity to be collectively rather than privately organized: a privately organized activity may impose significant diseconomies or externalities on outside parties that might be internalized through collectivization. In an idealized world with no transaction costs, these diseconomies and externalities could be eliminated through voluntarily negotiated arrangements; however, in the real world significant transaction costs can eliminate bargaining incentives.

The organization of a governmental decisionmaking process requiring something less than unanimous approval for collective action can lower transaction costs so that externalities can be efficiently internalized. But the abandonment of a unanimity requirement imposes certain "external costs." According to Buchanan and Tullock, an external cost is imposed on an individual each time a collective decision is enacted that the individual does not support. He is then "forced" to accept a decision that he would not have independently chosen. Therefore, the benefits of reduced transaction costs through collectivization must be balanced against the external costs resulting from a less than unanimous decisionmaking process. Buchanan and Tullock conclude that the economically optimal number of individuals required to take collective action should be fixed at a level at which the sum of transaction and externally imposed costs is minimized.\(^\text{29}\)

This analytical methodology can be used as a means of assessing, in any given dispute, the best procedure along the continuum for resolving the conflict. The selection of an optimal procedure can be

\(^{27}\) Although hard to quantify, recent empirical studies have indicated that the concept of imposition cost is more than merely a theoretical proposition. See Houlden, La Tour, Walker & Thibaut, \textit{supra} note 17 (demonstrating that participants in conflict are reluctant to relinquish control over resolution process).

\(^{28}\) J. \textsc{Buchanan} & G. \textsc{Tullock}, \textit{supra} note 20, at 64-68.

\(^{29}\) \textit{Id.} at 63-84.
illustrated as follows: transaction costs (T) can be viewed as a decreasing function of third-party control, that is, increasing third-party control decreases transaction costs involved in reaching a solution to the conflict; and imposition costs (I) can be viewed as an increasing function of third-party control as the individual parties have less control over process or decision. In the figure below, the vertical axis represents the relevant costs, and the horizontal axis represents (from left to right) an increasing presence of third-party control.

**MOST EFFICIENT DEGREE OF THIRD-PARTY CONTROL AS THE SUM OF TRANSACTION COSTS AND IMPOSITION COSTS**

Total costs (T+I) are the sum of the transaction and imposition costs. X indicates the most efficient degree of third-party control. With this framework, given our other assumptions, the most efficient procedure has a degree of third-party control at which the sum of transaction costs and imposition costs is minimized. The slopes of the curves will depend on the particular transaction costs involved and the particular form of imposition. The degree of third-party control will depend, not

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30. This presentation (and the graph in text) follows that used for the costs of decisionmaking in Buchanan and Tullock, id. at 97-116. See also id. at 63-84.
only on the type and extent of transaction costs, but also upon the potential imposition costs it would entail.

B. Externalities

Basic market theory predicts that a perfectly competitive economy will achieve a pareto optimal allocation of resources as the demand for and the supply of each good is balanced through the price mechanism. Accordingly, the quantity of every good produced will be determined by the market. Legitimate economic activity, however, frequently produces unintended or incidental by-products not subject to market regulation that alter our utility functions and, hence, affect our welfare. The production of these “goods” is not related to their demand, and, therefore, the level of their production is outside of or external to the market mechanism. These nonmarket goods are thus labeled externalities.31 The most frequently used example of an externality is the disutility produced by a smoke-belching factory on surrounding residents, but this dismal picture should not obscure the fact that externalities often confer positive utility to individuals. For instance, if X’s neighbors spend money repainting their homes and landscaping their yards, the neighborhood becomes more attractive, and X’s house increases in value. X has paid nothing for this benefit; X’s gain is an incidental by-product of his neighbors’ activity.

Economists worry about externalities because, even though their existence generates costs and benefits as real as any other good, the market does not ensure that their production will be optimized. Market activity left unchecked will underproduce goods generating positive externalities and overproduce goods generating negative externalities, resulting in a non pareto optimal allocation of resources. This inefficiency can infect the bargaining benchmark set out above. The model assumes that a bargained agreement between disputants confers no externalities on parties not directly associated with the conflict. In fact, it should be clear that agreements obtained through bargaining can have significant external effects.

Consider the following example: A tract of land suitable for commercial development has two streams (X and Y) running through it. A

company contracts with the landowner to buy a piece of the tract adjacent to stream X in order to build a factory. As a result of the factory's operation, residents living downstream suffer negative utility from the industrial waste dumped into stream X. The private bargaining between the landowner and the company did not take into account the disutility of the water pollution on downstream inhabitants. Had this externality and its impact on outside parties been recognized, a more optimal or, indeed, a \textit{pareto optimal} agreement could have resulted. For instance, suppose that there is a suitable site for a factory on the same tract along stream Y, and that there are no inhabitants downstream from this site. The tract owner would be equally willing to sell the site along stream Y, the company equally willing to develop on this site, and the stream X residents would avoid the disutility conferred by the industrial waste. The internalization of externalities through the participation of all parties potentially affected by the transaction has produced a new solution of higher utility since no one is made worse off and the stream X residents are made better off.

The problem in achieving a \textit{pareto optimal} solution in a transaction with externalities lies in securing the participation of all parties potentially affected by a negotiated agreement. Parties subject to the external effects of an agreement will typically not recognize their interest in the matter until a bargain has been reached without their participation and the resultant externalities come to their attention. At this late stage an alternate, more optimal arrangement may be impossible because of resource commitments by parties involved in the initial bargain. The lack of incentive to recognize the impact of externalities justifies third-party intervention in these cases. Intervention by a third party endowed with control of the dispute resolution process would act effectively to mitigate the tendency towards inefficiency that externalities can inject into bargaining. Those potentially subject to the external effects of a transaction could be identified and given the opportunity to participate in the bargaining process. Under these conditions there is every incentive for the parties to bargain to a \textit{pareto optimal} agreement.

Unfortunately, the internalization of externalities does not necessarily result in the type of solution presented by the stream X and stream Y example above in which the external effects of factory production upon stream X residents were effectively eliminated. Under a different set of assumptions, the original agreement between the landowner and company can be seen as \textit{pareto optimal} with any change resulting in a worsening of at least one party's position. Assume that
the stream X residents approach the two original bargainers and propose a change in the factory location to the stream Y site. The company determines that the switch will increase its costs by $5,000, and, therefore, that the move will make it worse off. Furthermore, assume there is no other solution that can eliminate the dumping of waste into stream X without an additional cost to the company; any change will make it worse off.

This example demonstrates that each solution within the *pareto optimal* set will not always be satisfactory to all parties. In these cases, a *pareto optimal* standard is not useful in dictating a solution and, therefore, more normative standards must be evolved. These standards, traditionally developed through common and statutory law, can endow certain parties with legal rights that could restrict the range of bargaining. These parties would assert these standards at the outset of the bargaining process and thereby place negotiations within legally sanctioned parameters. For instance, perhaps the stream X residents could prevent the industrial discharge by demonstrating that it would violate some type of environmental protection legislation. That the legislation would make the factory owner worse off has been deemed a legitimate trade-off by legislators who are often called upon to assess and maximize social utility between competing interest groups.

**C. Equity**

The bargaining model for conflict resolution assumed that the parties to the conflict were essentially equal in terms of objective factors relevant to the bargaining process. A bargaining solution becomes unacceptable and compensating change is justified when one party can expropriate most or all of the potential gains from exchange due to unequal access to information or resources to invest in the bargaining process. Such inequalities may also lead to high negotiation costs if one of the parties, knowing that the other has only a limited amount of time or resources, chooses to delay or complicate unnecessarily the resolution process in the hope of forcing the other party into a relevant income or time constraint and thus expropriate the potential gains. An equitable procedural system is one in which all parties are standardized upon their entry into the conflict resolution process. Only then will a welfare-maximizing solution be possible.

This standardization of the parties to satisfy equity criteria can realistically apply only to objective factors such as resources or information relevant to the conflict. The parties may be unequal in terms of
their propensity to bargain or in their intensity of preferences, but this will affect the negotiation process and merit third-party intervention, as discussed above, only if it leads to high negotiation costs. Thus third-party intervention may be warranted on equity grounds to standardize the parties prior to the bargaining process. The minimum form of this intervention would be the addition of a third party and the award of some degree of process control to that additional participant so that inequities in resources or information could be adjusted. From that point, depending on potential imposition and transaction costs, the parties would select a cost minimizing resolution procedure.

III. CONCLUSION

We conclude our argument and analysis by returning to the general contention of the critics that a procedural system that permits a substantial degree of participant control is costly and inefficient. This assertion has apparently been based on the recognized increase in transaction costs in a dispute as the degree of participant process and decision control increases. An autocratic procedure is admittedly more conducive to lower transaction costs, but viewing transaction costs as the only or principal criterion for reviewing the efficiency of a procedure is unwarranted because of the problems of allocative inefficiency inherent in more autocratic procedures and resultant imposition costs. Since imposition costs tend to increase as a conflict moves toward the autocratic end of the procedural continuum, they act to mitigate, at least to some degree, the lower transaction costs that such a shift would bring. The existence and magnitude of potential imposition costs depends on factors peculiar to the parties and the subject matter in dispute, such as uncertainty and highly individualized preferences. It is, therefore, not possible to specify the point on the procedural continuum that will be most efficient in resolving any particular dispute. The ability to make such an ex parte specification is totally unnecessary, however, because the parties can accurately make this determination for themselves. Based on their own assessments of the potential imposition costs involved in turning over some increment of process and decision control to a third party weighed against the reduction in transaction costs that such a delegation will bring about, the parties will move to the point on the procedural spectrum at which the sum of transaction and imposition costs is minimized.³²

³² The sum of each party's transaction and imposition costs will not necessarily be minimized at the same point on the procedural spectrum. To avoid the potential for a stalemate and
We can conclude from our analysis that this optimal procedure will be closer to the bargaining endpoint than any procedure advocated by critics of the adversary model who have ignored imposition costs in their one-dimensional efficiency calculi. Indeed, the advantage in low transaction costs produced by a highly autocratic procedure may be largely offset by substantial imposition costs associated with taking control away from the parties.

When there is a breakdown of assumptions upon which the smooth functioning of the market model depends, granting disputing parties free rein in choosing a resolution procedure will no longer bring about an efficient result. When a bargain among disputing parties is likely to confer significant externalities upon parties not involved in the bargaining, there exists the possibility of a non pareto optimal or inefficient resolution to the dispute. In these cases third-party process control intervention is called for so that potentially affected parties, who would be absent under a bargaining procedure, can be given the opportunity to participate in a resolution and suggest alternatives that would benefit them without harming the other parties involved. In effect, the existence of externalities would compel the parties to choose mediation, rather than bargaining, as the procedure offering the least third-party intervention. Of course, the parties would not necessarily choose mediation to ultimately decide the dispute; this would depend upon their own cost-benefit analysis of third-party intervention. Mediation would represent merely a “floor” to the parties in terms of their ability to limit third-party intervention into their dispute. A similar limitation would apply to disputes wherein one party, because of inadequate resources or information, is not able to bargain with the other party on an equal basis. A mediator would advise the weaker bargainer with respect to strategy as well as assist in gathering relevant information that the party has been unable to obtain.

The associated prenegotiation costs, we propose a system whereby the parties would be given a reasonable time period to agree on and specify a resolution procedure. Failure to reach such an agreement within the allocated period would result in the imposition of a standardized adversary model similar to that developed through the common law and currently used in courts of general jurisdiction in the United States. Although this procedure cannot be predicted to be more efficient in terms of transaction and imposition costs than any other along the spectrum, it does have a cost advantage in that it eliminates the necessity for developing an alternative. In addition, its use would guarantee that parties who are unable to agree on an alternate procedure would be made no worse off than under the limited range of choice that currently exists. This model does not ensure that parties would gravitate toward a more economically attractive procedure, it merely provides them with the opportunity to do so. Moreover, parties faced with the prospect of an imposed procedure would be expected to agree on any other that they both perceive to be less costly. In this fashion, a “deadline” provision would act as an incentive for the parties to work out a prenegotiation agreement.
Our differences with the critics may be illustrated by considering the differences between their proposed remedies for the problem of high cost and the remedies suggested by our conclusions. Apparently because of their focus on transaction costs, the critics have uniformly recommended as a remedy for inefficiency the adoption of procedures that shift substantial process and decision control to the decisionmaker. In other words, they have proposed the addition of a more autocratic model of decisionmaking with the provision that cases now adjudicated in the adversary model be shifted without exception to the new system. On the other hand, our analysis suggests that the problem of inefficiency should be remedied by the addition of a series of models that are scattered along the procedural dimension from the autocratic model to the bargaining end point. This would mean the addition, for example, of mediation, moot, and arbitration.

Furthermore, our conclusion suggests that the arbitrary assignment of a dispute to a particular model, as proposed by the critics, might be inefficient since it is proposed that the parties themselves should be allowed to choose the model that best minimizes the sum of imposition and transaction costs. This free choice is partially limited, of course, in those cases in which externalities or inequities exist; yet even in those situations a variety of procedural models would be available, and the parties would be free to choose an efficient system. The critics' solution continues acceptance of the "off the rack" procedural system wherein one model is judged best for all disputes. Our proposal, on the other hand, introduces the possibility of a better fit of procedure to the conditions of particular conflicts.

Abandonment of a standard solution can be accomplished by using current institutions that would offer a choice of procedures rather than the single system now traditionally available in American courts. For example, the bargaining model would be left in the private sector where it now operates, and the civil courts might offer disputants a choice of processes ranging on the continuum from mediation to a highly autocratic system. There need be no addition to the judicial bureaucracy because the same personnel could be used to operate the different models. Surely a skilled judge could serve as mediator, participant in the moot, arbitrator, judge in the adversary system, and autocrat. In essence, we share the critics' concern about cost, but we propose a solution that our analysis suggests is more likely to result in the efficient resolution of disputes.