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ABSTRACTS

REPORTS

R-2023-MF Copyright Liability for Cable Television: Is Compulsory Licensing the Solution? S. M. Besen, W. G. Manning, B. M. Mitchell. February 1977.

Analyzes the historical background and the economic issues leading to the General Revision of the Copyright Act, which provides a compulsory license instead of full copyright liability. This license permits cable systems to carry those signals currently authorized for retransmission by the Federal Communications Commission upon payment of a specified percentage of revenues. The basic thesis of this report is that the adoption of compulsory licensing will aggravate the problems associated with distant signal importation. (1) A compulsory license is less efficient than full liability because the consumers' willingness to pay for programs is perceived only indirectly by program suppliers. (2) The lack of specificity in the guidelines for allocating the compulsory license fees among suppliers can only aggravate their revenue problems. (3) Whereas full liability would have provided a more enduring resolution of the copyright liability for cable, the General Revision provides only a temporary solution. 44 pp. Bibliog.

R-2028-PSEC Medical Malpractice: The Response of Physicians to Premium Increases in California. A. J. Lipson. November 1976.

Malpractice insurance increases have not yet seriously affected California's physician supply or services, but have spurred practice changes affecting availability, cost, and quality of care. Findings indicate the public is paying part of the cost in fee increases. Some physicians are going without insurance; some have made practice changes, such as family physicians reducing or limiting surgery and obstetrics. Rural areas are hardest hit by such changes. Medi-Cal data indicate no measurable decrease in physicians treating Medi-Cal patients or in services or visits. Total physician supply in and migration to California have not been reduced. The author suggests that ways be considered to make the rate structure more flexible and that the state monitor and document the impact of rate increases in terms of (1) practice changes, (2) residency and practice location choices, (3) malpractice insurance rates in other states, and (4) effect on physician provider participation and distribution of Medi-Cal patients among physicians. 172 pp.

R-2220-HCFA The California Health Facilities Commission: A Case Study of Government Regulation. A. J. Lipson. November 1977.

Examines California's attempts to create institutions and policies for containing health facility costs, a goal that has been elusive for both federal and state governments. Cost containment pressures prompted the hospital industry to sponsor legislation, enacted in 1971, creating the California Health Facilities Commission and empowering it to imple-

ment a mandatory accounting, reporting, and public disclosure system for hospitals and, later, for nursing homes. Unsuccessful attempts have been made both to expand the Commission's authority to regulate facility rates and capital expenditures, and to abolish it altogether. The study describes the history of these attempts and of the Commission's implementation of its statutory charge, analyzes the primary influences on the California health facility regulatory process, and draws conclusions about future state legislation and the role of state agencies, physicians, and consumers in cost containment. 250 pp. Ref.

R-2224-NEW The Courts as Educational Policymakers and Their Impact on Federal Programs. B. Levin. August 1977.

Examines recent legal developments in education and their impact on federal policy, as well as discussing ways in which the legislative and executive branches can facilitate rather than impede state compliance with court mandates. Topics covered: school finance reform, public aid to parochial schools, inclusion of the handicapped in public education, equal educational opportunity for pupils with varying needs, race and sex discrimination, protection of individual rights of students and teachers, procedural due process for students and teachers, liability of school officials under *Wood vs. Strickland*, collective bargaining, and limitation of the judicial process. Courts must continue to redress specific inequities, but Congress and the executive branch can also enact programs to aid certain groups, or provide incentives to states to correct inequities. They can also encourage states to act before the courts have acted, or can assist states to achieve compliance with court orders. 135 pp. Ref.

R-2340-NIH/RC Doctors, Damages and Deterrence: An Economic View of Medical Malpractice. W. B. Schwartz, N. K. Komesar. June 1978.

Damages awarded in a malpractice suit must be viewed not only as compensating the victim but also as deterring health-care providers from negligent behavior. Economic analysis of the malpractice system indicates that awards can send a signal to providers that informs them how much to invest in avoiding mishaps. The malpractice system is beset by difficulties, but not the ones commonly incriminated. The signal to the physician, as determined by the number of claims and the size of awards ("expected damages"), appears to be insufficient for ideal deterrence. Moreover, the deterrence signal is attenuated because malpractice premiums are set for groups of physicians, not for individuals according to their record of previous malpractice incidents. Replacing the present tort system with a no-fault insurance scheme would not necessarily be cheaper, and might well abolish the deterrent signal or distort clinical decisionmaking. 23 pp. Ref.

R-2409-RC The Index of Harm: A Measure for Comparing Occupational Risk across Industries. K. A. Solomon, S. C. Abraham. June 1979.

Explores the implications and potential uses of an index-of-harm methodology for comparing occupational risk across industries. A preliminary comparison showed that at current average levels of radiation exposure and based on the apparently low International Commission of Radiological Protection (ICRP) estimates of the dose-harm relationship, the radiological "industry" appears to be less risky than mining; agriculture, forestry, and fisheries; construction; transportation; and manufacturing. The calculations were based on the risk effects of six occupational harms—three nonradiological (death, accidental injury, and disease or illness) and three radiological (radiation-induced somatic effects, genetic effects, and somatic effects on the fetus or embryo of pregnant women)—and on five different assumptions about the relative importance or degree of aversion of the six harms. The index of harm is a potentially useful tool in quantifying the benefits of reducing occupational risk. 36 pp. Ref.

R-2458-HCFA Contingent Fees for Personal Injury Litigation. P. M. Danzon. June 1980.

Plaintiff attorneys on personal injury cases are typically paid a contingent fee. Contingent fees are widely believed to induce excessive litigation and are increasingly regulated. A theoretical analysis of contingent and hourly wage contracts shows that, with competition for cases, attorneys paid a contingent fee will devote the amount of effort that would be chosen by fully informed, risk-neutral plaintiffs paying by the hour: the net value of the claim to the plaintiff will be maximized. However, risk-averse plaintiffs will underinvest in the number of suits and amount spent per case, if attorneys must be paid by the hour. Estimates of the effects of limits on contingent fees are presented. If the benchmark of the optimum expenditure on litigation is that which would be chosen by fully informed, risk-neutral plaintiffs, the unconstrained contingent fee is likely to induce the closest approximation to this ideal. 45 pp. Ref.

R-2622-HCFA The Disposition of Medical Malpractice Claims. P. M. Danzon. June 1980.

A theoretical and empirical analysis of the disposition of malpractice claims compares the actual outcomes with the legal standard of payment equal to damages, if, and only if, negligence occurred. An economic model of the settlement process assumes that the litigants attempt to maximize wealth, subject to the legal standards of liability and damage, and the costs of litigating. The model predicts that awards in settlements out of court will reflect the expected verdict, the probability of the plaintiff's winning, and the costs of going to court. The probability of the plaintiff's winning in settlement will also reflect the probability of winning in court, the size of the expected verdict, and the costs of going to court. Evidence from three malpractice claims surveys is consistent with the legal standard but departs in ways predicted by the model. Characteristics of the injury, the plaintiff, and the defense influence the outcome. 72 pp. Bibliog.

R-2623-HCFA Why Are Malpractice Premiums So High—Or So Low? P. M. Danzon. June 1980.

An empirical analysis of malpractice premiums paid by physicians in 1976 shows that the huge range (\$75 to over \$50,000) reflects the multiplicative structure of rates. Rates are the product of state, specialty, and coverage differentials, which together account for roughly 60 percent of the total variation in premium. This implies that the rating structure recommended by the Insurance Services Office is widely followed. In this sample, state differentials account for a smaller fraction of the total variance than specialty differentials. About half the total state effect can be attributed to differences in the frequency and severity of claims, presence of a discovery rule (an indicator of risk), and operation of medical society programs. Further research is necessary to determine how far this rigid structure of rates interferes with the efficient functioning of the tort system. (See also R-2458, R-2622, R-2661.) 45 pp. Bibliog.

R-2716-ICJ The Law and Economics of Workers' Compensation: Policy Issues and Research Needs. L. Darling-Hammond, T. J. Kniesner. 1980.

This document presents a review of the major issues of current concern to insurers, employers, workers, and government agencies regarding workers' compensation law. The compensation system has changed rapidly and dramatically over the past decade, raising new questions and problems with each reform. The authors discuss the issues that have been identified by experts in the field and suggest areas for research that will help to clarify the effects of different options for reforming or redesigning the system in response to these concerns. A brief history of workers' compensation in the United States and description of the current status of the law and the system itself is presented. Then the report analyzes in more detail some of the economic issues presented. The final section presents some suggestions for future research. The suggestions are directed toward achieving a greater understanding of how the workers' compensation system produces its outcomes and how proposed reforms will affect these outcomes. 86 pp. Bibliog.

R-2716/1-ICJ The Law and Economics of Workers' Compensation. Policy Issues and Research Needs: Executive Summary. L. Darling-Hammond, T. J. Kniesner. 1980.

This is an executive summary of R-2716-ICJ. 16 pp.

R-2717-ICJ Models of Legal Decisionmaking. Research Design and Methods. D. A. Waterman, M. A. Peterson. 1981.

Describes how the application of rule-based computer models could provide valuable information to the settlement process in civil litigation. Models would be developed by asking lawyers and insurance company claims adjusters to describe how they try to settle specific cases. Reasons for litigators' actions on a broadly representative range of hypothetical cases could be translated into a series of "if-then" rules. Each rule would describe part of the litigator's decision as an interim conclusion reached for a given set of premises for subsequent rules. The rules would be incor-

porated in a computer program that attempts to reproduce litigators' reasoning processes. A limited prototype developed to explore the feasibility of such models is described. It indicates that at least some aspects of the settlement process can be described by such models, although further research is needed to develop more comprehensive models and to address technical issues. 55 pp. Ref.

R-2732-ICJ Court Efforts to Reduce Pretrial Delay: A National Inventory. P. A. Ebener, J. Wilson-Adler, M. Selvin, M. S. Yesley. 1981.

This report is an inventory of state and local trial court procedures to reduce pretrial delay of civil cases. It lists and describes techniques employed by the courts to combat pretrial delay in all 50 state court systems, as reported by court administrators at both the state and metropolitan levels. It includes observations by court officials on how much the measures adopted have really changed the prior situation, and what problems, if any, have arisen. The report describes how the procedures operate and also raises implementation issues for consideration by courts planning to adopt such techniques. 117 pp. Bibliog.

R-2732/1-ICJ Court Efforts to Reduce Pretrial Delay: A National Inventory. Executive Summary. P. A. Ebener, J. Wilson-Adler, M. Selvin, M. S. Yesley. 1981.

This is an executive summary of R-2732. 27 pp.

R-2733-ICJ Judicial Arbitration in California: The First Year. D. Hensler, A. J. Lipson, E. S. Rolph. 1981.

A study of the critical implementation phase of the California judicial arbitration program. The report begins by identifying the primary objectives of the program's supporters. The authors then describe the historical background of the adoption of mandatory arbitration in California, and the evolution of the program's design. The results of the exploratory analysis of the program's effects are then presented. Arbitration's potential for reducing court workload is examined. The costs of operating the program during the first year are analyzed and an approach to estimating the program's potential effect on court costs is presented. A discussion of the effects of arbitration on litigants, focusing on time to disposition, costs of litigation, and equity is given. The final section summarizes the findings and discusses how certain groups are likely to respond to the program in the future. The section concludes with a discussion of the research that will be needed for a comprehensive analysis of the costs and benefits of the judicial arbitration program. 120 pp.

R-2733/1-ICJ Judicial Arbitration in California: The First Year. Executive Summary. D. Hensler, A. J. Lipson, E. S. Rolph. 1981.

This is an executive summary of R-2733-ICJ.

R-2792-ICJ The Resolution of Medical Malpractice Claims: Modeling the Bargaining Process. P. M. Danzon, L. A. Lillard. 1982.

This report makes two contributions to the area of legal studies. First, it develops a methodology that permits estimation of a model of the process of dispute resolution, including outcomes in court and in out-of-court settlements. This methodology, including issues of statistical estimation and identification, is carefully detailed. Second, the report applies the model to data on medical malpractice claims. The model of dispute resolution is presented in Sec. II. Section III discusses statistical issues of estimation, parameter identification, and prediction. Section IV describes the malpractice data for 1974 and 1976 and briefly presents parameter estimates. The parameter estimates and their interpretation are discussed in detail in Sec. V. Section VI presents further implications of the estimates for tort reform, accounting for the distribution of dollar payments and the probability of winning in court. Concluding remarks appear in Sec. VII. 59 pp. Ref.

R-2793-ICJ The Resolution of Medical Malpractice Claims: Research Results and Policy Implications. P. M. Danzon, L. A. Lillard. 1982.

In the early 1970s, both the frequency of medical malpractice claims and the dollar awards to successful plaintiffs rose at unprecedented rates. In 1974-1975, the malpractice insurance crisis erupted. By the end of 1976, most state legislatures had enacted laws to deal with the perceived causes of the crisis. With only scant empirical evidence on the actual operation of the tort system and likely effects of any changes, however, legislators have had to rely on anecdote, subjective reasoning, and conventional wisdom. The research summarized in this report aims at rectifying that deficiency. It analyzes two computerized files on over 6,000 closed claims, using a computerized model of the bargaining behavior through which claims are resolved. It produced useful evidence on the actual operation of the malpractice system, including changes made during the crisis, and analytic tools that can be applied to understand dispute resolution in other contexts. 33 pp. Ref.

R-2870-ICJ/HCF The Frequency and Severity of Medical Malpractice Claims. P. M. Danzon. 1982.

The frequency and severity of medical malpractice claims increased dramatically in the late 1960s and early 1970s. In response to the malpractice crisis, many states enacted changes in tort law applicable to medical practitioners. This report presents some empirical evidence on the contribution of various factors to the diversity in the frequency and severity of claims across states and over time. Section II provides an overview of countrywide trends in claims for different lines of liability insurance and differences among states in malpractice litigation. Section III presents a theoretical model of the frequency and severity of medical malpractice claims. Section IV describes the data and methodological issues. Section V reports the empirical analysis of frequency of claims per capita, average severity per claim, and average claim cost per capita. Section VI analyzes the determinants of the post-1975 tort reform. Section VII summarizes the findings and policy implications. 52 pp. Bibliog.

R-2881-ICJ The Civil Jury: Trends in Trials and Verdicts, Cook County, Illinois, 1960-1979. M. A. Peterson, G. L. Priest. 1982.

This report presents the results of an extensive examination of the decisions made by litigants, courts, and juries in a large number of civil jury trials. It is based on detailed data on 9,000 civil cases that were tried before juries in Cook County, Illinois (the nation's second largest county), between 1960 and 1979. The information in the report details more than 9,000 civil suits tried to verdict. These include all civil suits for money damages other than those arising from automobile and common carrier accidents and a one-quarter random sample of automobile and common carrier cases. The report describes trends in the number of civil jury trials, in the proportion of cases in which defendants are found liable and in the size of awards to plaintiffs. These trends are analyzed separately for ten different types of civil cases. The report does not try to explain the trends nor to draw out their implications. This report is the first in a series that will use the data to delve into the underlying causes of the events. 73 pp. Bibliog.

R-2881/1-ICJ The Civil Jury: Trends in Trials and Verdicts, Cook County, Illinois, 1960-1979. Executive Summary. M. A. Peterson, G. L. Priest. 1982.

This is an executive summary of R-2881-ICJ. 14 pp.

R-2882-ICJ Cost-Benefit Analysis and Voluntary Safety Standards for Consumer Products. L. L. Johnson. 1982.

The purpose of this study is to explore the opportunities for expanding the use of cost-benefit analysis, to discuss the problems standing in the way, and to suggest experiments with it that can serve as benchmarks for further application. The study also recommends the collection of better product-hazard information; such information would be a valuable input if cost-benefit analysis is adopted, and if it is not, it could still serve as a partial substitute for such analysis in the formulation of future standards. Section II treats several topics as a foundation for the subsequent analysis. Section III discusses the relationships among costs, benefits, and the optimal level of product safety, and the difficulties of pursuing cost-benefit analysis. Section IV explores the very limited past use of cost-benefit analysis in developing voluntary standards. Section V addresses a particularly important problem in improving the quality of cost-benefit analysis—that of obtaining better hazard information. The concluding Section VI touches briefly on tradeoffs between devoting resources to cost-benefit analysis and devoting them to other approaches to help ensure the appropriate level of product safety. 71 pp. Bibliog.

R-2888-ICJ Costs of the Civil Justice System: Court Expenditures for Processing Tort Cases. J. S. Kakalik, A. Robyn. 1982.

This report deals with government expenditures for processing tort cases, drawing on available data from federal and state agencies. Section II presents data on average judge-time expended per tort cases filed, followed by data on the

total government expenditure per judge in Sec. III. The average government expenditure per tort case filed is calculated in Sec. IV by multiplying the judge-time per case times the total government expenditure for all types of personnel combined and other resources used per judge-minute. Finally, Sec. V estimates the nationwide total annual government expenditure for processing tort cases. 91 pp. Ref.

R-2904-ICJ Educational Policymaking through the Civil Justice System. P. T. Hill, D. L. Madey. 1982.

This report analyzes the use of the civil justice system to decide the allocation of public services, in particular the 1975 Education for All Handicapped Children Act. The authors found there were three effects of using civil justice procedures to allocate educational services: (1) effects on the courts are slight; (2) effects on school systems are real but limited; and (3) effects on handicapped children are positive—but some, especially those whose parents are willing to threaten litigation, benefit far more than others. The most important finding of the study is that the introduction of civil justice procedures has had an enormous effect on local school policy, despite the low volume of litigation. The authors drew two conclusions regarding the use of the civil justice system to decide the allocation of public services: (1) thanks to the introduction of civil justice methods, PL-94-142 is applied with far more rigorous attention to the rights and duties of school personnel and beneficiaries than are other federal education programs; and (2) despite the optimistic conclusions, the findings do not necessarily warrant the extension of civil justice procedures to other areas of local educational policy. 34 pp. Ref.

R-2918-ICJ Workers' Compensation and Workplace Safety: Some Lessons from Economic Theory. R. B. Victor, L. R. Cohen, C. E. Phelps. 1982.

This report uses the tools of economic theory to analyze how firms can be expected to respond to financial incentives. The report focuses on a statement that is usually assumed to be true and is repeated as conventional wisdom by many policymakers and the researchers who advise them: Increasing Workers' Compensation (WC) benefits induces a firm to increase safety. This report presents the results of a theoretical analysis of how WC financial incentives influence the safety decisions of rational profit-maximizing firms. The research suggests that although the common wisdom has a strong theoretical basis in many cases, it does not have it in all cases, and the empirical evidence fails to provide much support for it. The analysis explores the conditions under which increasing WC benefits may enhance, diminish, or leave unaffected employers' investments in safety. 64 pp. Bibliog.

R-2922-ICJ The Pace of Litigation: Conference Proceedings. J. W. Adler, W. L. F. Felstiner, D. Hensler, M. A. Peterson. 1982.

Reports the proceedings of a conference dealing with past and planned empirical investigation of the delay of litigation. The three sessions of the conference dealt with the pace of court activity; the pace of lawyer activity; and arbitration and the pace of litigation. Part I provides a synopsis

of conference proceedings and Part II a transcript of the talks and discussions which followed. 145 pp.

R-2979-ICJ Workers' Compensation and Workplace Safety: The Nature of Employer Financial Incentives. R. B. Victor. 1982.

This report provides, for the first time in convenient form, data and methods needed to examine the nature, size, and adequacy of Workers' Compensation (WC) financial incentives for prevention, and hence to evaluate the conventional wisdom about WC and safety. The report examines the WC financial incentives facing employers, under different insurance arrangements. The findings of the study demonstrate the sensitivity of incentives to the characteristics of each state's WC system, firm size, interest rates, and insurance arrangements. Other conclusions reached include: The conventional wisdom is that self-insured incentives exceed experience-rated insured incentives, but the reverse is often true; retrospective-rated incentives will typically exceed both self-insured and experience-rated incentives; and generalizations about the size of WC financial incentives should be made with great care. 68 pp. Bibliog.

R-2985-ICJ Costs of the Civil Justice System: Court Expenditures for Various Types of Civil Cases. J. S. Kalik, R. L. Ross. 1983.

This report analyzes the cost of processing domestic relations, mental health, probate and guardianship, property rights and condemnation, torts contracts and other civil complaints, and other civil petitions cases. Section II details the procedures for estimating and analyzing government expenditures for processing civil cases. Section III describes how the study derived the government expenditure per judge for each of the courts in the study—a necessary element in the cost-estimation procedure. Section IV reports the estimates of government expenditure and judge-time per civil case filed for various types of civil cases in state and federal courts. Finally, Sec. V provides estimates of the total nationwide government expenditure for processing civil cases. 125 pp.

R-3002-ICJ Managerial Judges. J. Resnik. 1982.

This report is a study of the recent development of case management by federal judges during both the pretrial and posttrial phases of litigation. After discussing the underlying assumptions about the traditional judicial role, the author gives a full description of how judges manage both phases of lawsuits. Next the author analyzes what is currently known about the results of pretrial management and what effect such management might have upon the traditional judicial role. Finally, the author sets forth the alternative routes which judicial reformers might follow. An appendix on the iconography of justice is included. 74 pp.

R-3006-ICJ Comparative Justice: Civil Jury Verdicts in San Francisco and Cook Counties, 1959-1980. M. Shanley, M. A. Peterson. 1983.

In this report, the authors describe San Francisco jury trials and jury verdicts during the 20-year period from 1960 through 1979, and compare trends and patterns with those

found in Cook County, Illinois. The data describe approximately 5,300 civil cases that were tried before juries in San Francisco County. These are then compared with an earlier study of Cook County civil jury trials. The study suggests that there is reasonable similarity in jury decisions over time and in different places. Although these results provide reassurance about juries, the frequency of these low-stakes cases raises questions about the economics of the civil justice system. However, most of the jury trials studied are probably economically justified for the parties. Although the analyses in this report cannot explain why, there was one important change in jury verdicts in both jurisdictions—the size of the largest awards. The size of the largest awards grew sharply in both jurisdictions. In both studies the authors found a general stability and consistency in jury decisions over time and across jurisdictions. 91 pp. Bibliog.

R-3011-ICJ Compensation of Injuries: Civil Jury Verdicts in Cook County. M. A. Peterson. 1984.

This report describes types of injuries and losses claimed by plaintiffs, changes in claims during the 1960s and 1970s, and relationships between juries' decisions and (1) plaintiff's physical injury, (2) the economic loss suffered by plaintiff, (3) the type of lawsuit brought, and (4) the year in which the case was tried. The findings show that neither the types of injuries claimed by plaintiffs nor the level of compensation for most injuries changed appreciably between 1960 and 1980. However, compensation for the small number of cases that involved unusually severe injuries grew in recent years. The findings also show that compensation for similar injuries differed by as much as four-fold among different types of law suits, and that such differences increased in the 1970s. The report offers explanations for why compensation might differ among types of suits and describes further research that will examine some of these possible explanations. 95 pp. Ref.

R-3013-ICJ New Tools for Reducing Civil Litigation Expenses. M. A. Peterson. 1983.

The resolution of civil liability claims is an expensive and uncertain process. Frequent parties to civil litigation face growing costs, but they might reduce the expense and uncertainty of litigation through new methods for using computers. Organizations that have experience in handling a large volume of civil litigation can use these methods to manage groups of cases and to organize single, complex cases. Four new methods for using computers—open claim analysis, closed claim analysis, decision analysis, and rule-based modeling—may reduce the direct costs of litigation and the indirect costs of uncertainty in evaluating civil claims. All four methods have been used to analyze and support decisions about litigation, but most have not been widely applied. This report describes the development, uses, and limitations of each method, so that insurance company claim departments, law firms, corporations, and other frequent parties to litigation can consider whether those methods might be of help. 40 pp. Ref.

R-3022-ICJ Designing Safer Products: Corporate Responses to Product Liability Law and Regulation. G. C. Eads, P. H. Reuter. 1983.

Analyzes ways in which firms have responded to recent changes in pressures to design safer products, using interviews with product safety officials in major manufacturers and extensive analysis of legal and scholarly literatures. Shifts to strict liability and more stringent regulation during the last 15 years have increased pressure to invest in safety assurance procedures, as evidenced by creation of new corporate product safety units. Regulation has been of more questionable effectiveness than has strict liability in inducing better design practices. Argues that federal product liability legislation will have marginal effect, despite the current variation in state law on the matter. Discusses the factors that influence the effectiveness of corporate product safety units and suggests that combining product safety with quality assurance may be the optimal strategy for a firm. 160 pp. Ref.

R-3032-ICJ The Selection of Disputes for Litigation. G. L. Priest, B. H. Klein. 1984.

This study addresses the relationship between litigated disputes and disputes settled before or during litigation by presenting a model of the litigation process in which the determinants of settlement and litigation are solely economic, including the expected costs to parties of favorable or adverse decisions, the information that parties possess about the likelihood of success at trial, and the direct costs of litigation and settlement. The most important assumption of the model is that potential litigants form rational estimates of the likely decision, whether it is based on applicable legal precedent or judicial or jury bias. From this proposition, the model shows that the disputes selected for litigation (as opposed to settlement) constitute neither a random nor a representative sample of the set of all disputes. 55 pp.

R-3042-ICJ Costs of Asbestos Litigation. J. S. Kalalik, P. A. Ebener, W. L. F. Felstiner, M. Shanley. 1983.

This report examines the money spent to resolve asbestos-related injury lawsuits: who pays it, who receives it, and for what purposes. After sketching the tangled context in which spending occurs for asbestos product liability litigation in the introduction, subsequent sections analyze the actual costs incurred by plaintiffs, defendants, and insurers in the course of processing asbestos suits to resolution. The analysis focuses on net compensation (money received by injured persons after deducting litigation expenses), and on defense and plaintiff expenses (money paid to operate the legal and insurance systems through which society decides who should receive how much compensation and arranges for actual payment). Finally, the authors total the expenditures and examine the ratio between litigation expense payments and net compensation (the "overhead" costs incurred in generating one dollar in payment to an injured person). 40 pp.

R-3050-ICJ Automobile Accident Compensation: Vol. 1, Who Pays How Much How Soon? J. E. Rolph, J. K. Hammitt, R. L. Houchens, S. S. Polin. 1985.

This study uses statistical methods to compare state automobile accident compensation systems by examining how likely an accident victim is to be paid, and the amount and timing of his payment. The study analyzes how various aspects of the tort system and of the no-fault systems, where present, affect these outcomes. Among its findings were (1) victims in no-fault states more often collect from first-party automobile insurance than victims in other states; (2) victims in no-fault states are more likely to receive some payment; and (3) there is more consistency in payments in no-fault states in that the total amount of compensation a victim receives for a given economic loss varies less. (See also R-3051-ICJ, R-3052-ICJ, R-3053-ICJ.) 33 pp. Bibliog.

R-3051-ICJ Automobile Accident Compensation: Vol. 2, Payments by Auto Insurers. J. K. Hammitt. 1985.

Automobile accident victims may receive financial compensation from several sources, depending on the rules of their state. This report analyzes closed insurance claims data to describe the effects of interstate differences in liability rules and insurance regulations on the compensation payments made under automobile no-fault and liability insurance policies. No-fault payments are usually equal to the claimant's economic loss, and no-fault claimants generally receive at least partial payment more quickly than liability-insurance claimants. Liability-insurance payments also cover most claimants' economic losses, and frequently include payment for general damages (e.g. pain and suffering) which, while highly variable, often exceed economic losses. Alternative liability rules have only modest effects on the number of victims who obtain payment under a liability policy. (See also R-3050-ICJ, R-3052-ICJ, R-3053-ICJ.) 121 pp. Ref.

R-3052-ICJ Automobile Accident Compensation: Vol. 3, Payments from All Sources. R. L. Houchens. 1985.

This report compares outcomes of compensation systems for victims of automobile accidents from three groups of states: (1) no-fault states, with no-fault legislation that restricts tort liability; (2) add-on states, in which no-fault legislation does not restrict tort liability; and (3) tort states, without no-fault legislation. Among the study's conclusions were the following: (1) the probability of an auto accident victim's receiving any payment for his losses is higher in add-on and no-fault states than in tort states; (2) the average payment to the victim is usually nearer his economic loss in no-fault states than it is in tort states and add-on states for small losses; (3) the employer is the single most frequent source for payment of wage loss, and pays exactly the amount of wage loss about eighty percent of the time; and (4) victims in no-fault states appear to have a better chance of getting some compensation for wage loss than do victims in tort states. (See also R-3050-ICJ, R-3051-ICJ, R-3053-ICJ.) 63 pp. Ref.

R-3053-ICJ Automobile Accident Compensation: Vol. 4, State Rules. J. K. Hammitt, R. L. Houchens, S. S. Polin, J. E. Rolph. 1985.

The rules governing the sources of financial compensation that are available to accident victims vary widely between states. This report catalogues and explains the current lia-

bility rules and insurance regulations in all fifty states. As an aid to understanding the patterns of rules within states, it classifies the states into ten groups, using a refinement of the traditional tort/no-fault/add-on system. (See also R-3050-ICJ, R-3051-ICJ, R-3052-ICJ.) 61 pp. Ref.

R-3071-ICJ Simple Justice: How Litigants Fare in the Pittsburgh Court Arbitration Program. J. W. Adler, D. Hensler, C. E. Nelson, G. J. Rest. 1983.

This report examines the arbitration program of the Pittsburgh (Allegheny County) Court of Common Pleas which at the time of the study applied to cases of \$10,000 or less. Section II describes how arbitration works in Pittsburgh and analyzes the characteristics of the arbitration caseload. Section III analyzes the objective outcomes of arbitration: the distribution of wins and losses, the amounts of money awarded to different types of cases and litigants, the pattern of appeals, the distribution of appeal outcomes, and the costs associated with taking a case to arbitration hearing and through the appeal process. In Sec. IV the authors discuss litigants' views of arbitration. Also described are litigants' assessments of the "fairness" of the arbitration process and of the appropriateness of case outcomes, their level of satisfaction, and the role or perceptions of procedural fairness in determining litigant satisfaction. Section V assesses the uses and limitations of court-administered arbitration programs, drawing on the results of the previous sections. 152 pp. Ref.

R-3084-ICJ Regulating the Content and Volume of Litigation: An Economic Analysis. G. L. Priest. 1983.

In recent years, courts and legislatures have used rules that shift liability for court costs and attorneys' fees to plaintiffs or defendants to achieve two different objectives: to encourage litigation by particular plaintiffs (in civil rights, pollution, and consumer litigation), and to regulate the volume of litigation (most commonly to encourage settlement). These goals are contradictory and in conflict in a recent Supreme Court case, *Delta Air Lines, Inc. vs. August*. This essay discusses the distributive effects of these rules and their effects on the rate of litigation. The analysis expands other recent treatments by considering offer-of-judgment rules and the parties' strategic actions. 21 pp.

R-3132-ICJ Variation in Asbestos Litigation Compensation and Expenses. J. S. Kakalik, P. A. Ebener, W. L. F. Felstiner, G. W. Haggstrom, M. Shanley. 1984.

This report analyzes characteristics of individual claims that explain variation in compensation and expenses. The first section describes the research approach and sketches the tangled context in which spending occurs for asbestos product liability litigation. Section II presents data on the characteristics of closed claims and on the actual compensation paid and expenses incurred by plaintiffs, defendants, and insurers in 1980-1982. Section III focuses on explaining the variation in total compensation. Sections IV, V, and VI, respectively, analyze claim characteristics that help explain why certain claims receive no compensation, identify which claims proceed to trial instead of being closed before trial, and identify which claims result in punitive awards. Sections VII and VIII analyze the variations in defense and

plaintiff litigation expenses. Finally, Section IX totals the expenditures and examines the ratio between litigation expense payments and net compensation. 91 pp.

R-3166-ICJ Managing the Unmanageable: A History of Civil Delay in the Los Angeles Superior Court. M. Selvin, P. A. Ebener. 1984.

This study of civil delay and congestion in the Los Angeles Superior Court since the early twentieth century is an effort to provide an empirical basis for determining the extent to which these problems have worsened over the years. It considers (1) whether civil delay has increased steadily; (2) whether sources of delay are the same now as in the past; (3) effectiveness of innovations the court has introduced in the past to improve the situation; (4) larger institutional or political forces that may have influenced the effectiveness of any procedural innovation; and (5) how delay in Los Angeles courts compares with that of other metropolitan trial courts. The authors do not find a conclusive explanation for the recent increases in civil delay in Los Angeles, but believe that changes in the characteristics of the civil caseload may have contributed to increased delay, and find that this conclusion applies to other metropolitan areas as well. They conclude that the court should focus its delay-reduction efforts on adding to its existing resources and more effectively allocating the resources it does have to its most time-consuming cases. 172 pp. Bibliog.

R-3167-ICJ Introducing Court-Annexed Arbitration: A Policymaker's Guide. E. S. Rolph. 1984.

Court-annexed arbitration is a court-run dispute resolution process to which cases that meet some specified criteria are involuntarily assigned. Arbitrators hear the case and render awards that are not binding, however, as a litigant may always request a trial. In the last decade, court-annexed arbitration has gained popularity as a means of handling small civil cases. Using in-depth analysis of arbitration in several courts, and survey results from a remaining group of courts, this report summarizes the variety of program design alternatives, assesses the probable implications of choosing one set of alternatives over another, and discusses methods that courts adopting arbitration might use to evaluate its effectiveness. 113 pp. Bibliog.

R-3249-ICJ Deep Pockets, Empty Pockets: Who Wins in Cook County Jury Trials. A. W. Chin, M. A. Peterson. 1985.

This report examines how different types of parties fared in over 9,000 civil jury trials in Cook County, Illinois, between 1959 and 1979. It builds on two previous studies of civil jury trials, *The Civil Jury: Trends in Trials and Verdicts*, Cook County, Illinois 1960-1979, R-2881-ICJ, and *Compensation of Injuries: Civil Jury Verdicts in Cook County*, R-3011-ICJ. These studies found substantial disparities in outcomes for different types of lawsuits, even after the types and seriousness of plaintiffs' injuries and the amount of claimed economic losses were accounted for. The analyses in the present report describe variations in outcomes for different types of litigants, and find that corporate defendants paid damage awards that were one-third larger than those that individual defendants had to pay. Govern-

ment defendants paid even more than corporations in most of their lawsuits. However, corporations fared worse than all other defendants in lawsuits where plaintiffs claimed very severe injuries. Among individual litigants, blacks lost more often than whites, both as plaintiffs and defendants, and black plaintiffs received smaller awards. Black defendants, however, paid less than their white counterparts. 108 pp. Ref.

R-3311-ICJ Punitive Damages: Empirical Findings. M. A. Peterson, S. Sarma, M. Shanley. 1987.

Based on cases that reached jury verdict in Cook County, Illinois, and San Francisco, California, from 1960 to 1984, this report presents analytically derived answers to questions surrounding the award of punitive damages: (1) how frequently punitive damages are awarded in civil suits, (2) what types of cases and defendants are most subject to such awards, and (3) what proportion of the monies awarded in punitive damages is actually paid out. The findings confirm trends for which there had only been anecdotal evidence: The incidence of punitive damage awards (measured by proportion of cases in which such awards are made) and the amount of money (measured in constant 1984 dollars) awarded for punitive purposes have increased substantially over the years. Corporate defendants are in fact more likely than individuals or public agencies to be the target of such awards. Many damage awards are significantly reduced and only about half of the dollars awarded are ultimately paid subsequent to award at the trial court level. 68 pp. Ref.

R-3324-ICJ Asbestos in the Courts: The Challenge of Mass Toxic Torts. D. Hensler, W. L. F. Felstiner, M. Selvin, P. A. Ebener. 1985.

This report presents the results of a study of how the civil justice system has dealt with the challenges presented by asbestos litigation. Its sections describe (1) the characteristics of asbestos litigation, both at the individual case level and at the aggregate level; (2) the way in which the court system has approached the three critical tasks of litigation—substantive decisionmaking, preparing cases for trial, and disposing of cases; and (3) the implications of the findings. Based on their observations of the asbestos litigation process, the authors review the strengths and weaknesses of the tort system as a mechanism for resolving mass toxic torts, consider changes that might strengthen the system, and suggest a mechanism for formulating new policies. 128 pp. Bibliog.

R-3391-ICJ Costs and Compensation Paid in Tort Litigation. J. S. Kakalik, N. M. Pace. 1986.

This study was undertaken to answer the following questions: What was the total expenditure nationwide for tort litigation terminated in state and federal courts of general jurisdiction in 1985? How much of the total was spent for the various costs of the tort litigation system: plaintiffs' and defendants' legal fees and other litigation expenses, the value of litigants' time spent on the lawsuits, the value of time spent by insurance personnel, and the costs of operating the courts? How much of the total was net compensation to plaintiffs? How do litigation costs and compensation

paid differ for torts involving motor vehicles and for all other torts? How fast is the tort system growing? The study indicates that plaintiffs with tort lawsuits in state and federal courts of general jurisdiction received approximately half of the \$27 billion to \$34 billion spent in 1985. The costs of litigation consumed the other half. 157 pp.

R-3410-ICJ New Evidence on the Frequency and Severity of Medical Malpractice Claims. P. M. Danzon. 1986.

This report updates an earlier analysis (R-2870-ICJ/HCF) of the effects of demographic, medical, and legal factors on the frequency and severity of medical malpractice claims. Using claims data from 1975–1984, the author analyzes the effects of tort reform on malpractice claims after taking into account the effects of other variables that have previously been shown to correlate with claims frequency and severity. The evidence from the study suggests that the last round of tort reforms affected the frequency and severity of malpractice claims over the decade 1975–1984 in a way broadly consistent with theory and previous evidence. Claim frequency per physician has grown at roughly 10 percent a year and severity has increased at twice the consumer price inflation rate. Nevertheless, tort changes have had some effect. States that enacted shorter statutes of limitations and set outer limits on discovery rules have had less growth in claim frequency than would otherwise have been predicted. States with statutes permitting or mandating the offset of collateral benefits had 14 percent fewer claims, and 11 to 18 percent smaller payouts, than would otherwise have been predicted. States with caps on awards have reduced severity by 23 percent. Arbitration statutes appear to have increased claim frequency but reduced average severity. 35 pp.

R-3421-ICJ Costs and Compensation Paid in Aviation Accident Litigation. J. S. Kakalik, E. M. King, M. Traynor, P. A. Ebener, L. O. Picus. 1988.

Based on a review of more than 2,000 U.S. airline aviation accident death cases from 1970 to 1984, this report describes the characteristics of the decedents and compares the compensation paid to their survivors with the levels of economic loss they suffered. The study found that the plaintiffs received 71 percent in net compensation, and 29 percent went for transactions costs. The findings indicate that airline accident litigation has higher transactions costs, but a lower ratio of transactions costs to total expenditures than tort litigation in general. (See also R-3549, R-3551, R-3585, R-3684, N-2773.) 150 pp.

R-3466-ICJ Civil Juries in the 1980s: Trends in Jury Trials and Verdicts in California and Cook County, Illinois. M. A. Peterson. 1987.

This report extends earlier efforts to document and analyze the outcomes produced by the civil justice system based on studies of civil jury trials in Cook County, Illinois, and San Francisco County, California. First, the report updates the earlier work by incorporating data for the years 1980 through 1984. Second, it expands the scope of the study to include the entire state of California. Past patterns in jury awards continued in Cook County during the 1980s: The

size of most jury awards did not increase (the median actually fell), but large jury awards, and therefore the average, increased sharply. The pattern that prevailed in both jurisdictions during the 1960s and 1970s, however, changed in San Francisco: There was a substantial increase in the size of awards during the 1980s across the entire range of cases tried in state and federal courts. Unlike past findings, the increase was not restricted to a few very large awards. The average award increased as in previous years, but median awards also increased to triple the median of the late 1970s. 62 pp. Ref.

R-3473-ICJ The Debate over Jury Performance: Observations from a Recent Asbestos Case. M. Selvin, L. O. Picus. 1987.

Recent verdicts in lawsuits arising from widespread exposure to toxic substances and large compensatory and punitive awards in traditional liability cases have revived debates and complaints about the competency of lay jurors. This case study describes an interview conducted with the jury that decided an asbestos products liability case in Texas in 1984. After deliberating one day, the jury found each defendant liable and awarded the four plaintiffs \$7.9 million. The legal issues raised in the Newman trial, the claims made, and the witnesses and evidence on each side are typical of those raised in other asbestos jury trials. According to experimental research, jurors do not have full or accurate memories for trial testimony. The Newman panel behavior is consonant with experimentally based observations, but that does not explain why the panel reached its specific decision. In some ways, most notably how it computed its large compensatory damage awards, its behavior was inconsistent with previous findings about jury behavior. 110 pp. Bibliog.

R-3511-ICJ Posttrial Adjustments to Jury Awards. M. Shanley, M. A. Peterson. 1987.

Motivated by the recent national debate on the growth of jury awards, this report examines how jury awards change after trial. It considers not just tort actions, but all civil suits for money damages. For all types of cases, it (1) compares jury awards to final payments, (2) examines how results vary by award size, and (3) studies whether results differ by case characteristics. The authors find that, in the locales studied, defendants paid out an average proportion of 0.71 of the amount the jury originally awarded. Further, reductions were generally greater among cases with the largest awards. However, some sizable awards were not lowered, and results differed significantly depending on the characteristics of the case. The findings suggest that the system works already in much the same way that the current proposals for legal change are intended to work, namely by affecting "excessive" awards. 76 pp. Ref.

R-3549-ICJ Computing Economic Loss in Cases of Wrongful Death. E. M. King, J. P. Smith. 1988.

This report outlines a new method for computing economic loss in cases of wrongful death. The authors use the human capital (or lost economic output) approach because it dominates actual litigation. In this conceptual model, economic loss is the value of the decedent's lost future productivity,

market and nonmarket. The methodology includes seven elements: (1) base-year incomes, (2) salary growth, (3) worklife discounts, (4) nonmarket loss, (5) personal consumption offset, (6) taxes, and (7) discount rates. The methodology can be applied in a wide range of tort cases besides wrongful death. (See also R-3421, R-3551, R-3585, R-3684, N-2773.) 124 pp. Bibliog.

R-3551-ICJ Economic Loss and Compensation in Aviation Accidents. E. M. King, J. P. Smith. 1988.

This report considers wrongful-death litigation resulting from aviation accidents. It compares benchmark measures of economic loss and loss to survivors with the compensation that beneficiaries actually received. The findings indicate that for the years under study, the tort system did not fully compensate survivors for the losses they suffered from air accidents; similarly harmed individuals were not treated the same; compensation paid through the tort system does not significantly add to safety incentives; and compensation and recovery rates have risen dramatically over the years under study. (See also R-3421, R-3549, R-3585, R-3684, N-2773.) 123 pp.

R-3554-ICJ Assessing the Effects of Tort Reforms. S. J. Carroll, N. M. Pace. 1987.

This report offers a framework for assessing the effects of tort reforms. It attempts to provide a coherent structure for systematically thinking about how research can contribute to the policy debate over tort reform. It identifies four basic policy issues critical to assessing the effects of tort reforms on the tort system: (1) how soon we can expect to see effects of reforms; (2) whether reforms have affected the outcomes of disputes; (3) who won, who lost, and how much; and (4) whether reforms have affected economic behavior. The author points out that the kinds of data needed to assess the effects of reform are generally not available, and suggests that three types of new data collection systems need to be considered: (1) systematic efforts to obtain data from insurers and self-insured defendants on the aggregate outcomes of liability claims; (2) special surveys of claimants, the bar, and insurers to obtain the detailed individual claim information needed to identify the winners and losers in the reformed system; and (3) systems for collecting information both on the other factors that affect the behavior of participants in the tort system, and on economic outcomes and injuries. 72 pp.

R-3583-ICJ Trends in Tort Litigation: The Story Behind the Statistics. D. Hensler, M. E. Vaiana, J. S. Kalklik, M. A. Peterson. 1987.

This *Special Report* from The RAND Corporation's Institute for Civil Justice (ICJ) draws on seven years of ICJ research to consider three issues at the heart of the recent debate on trends in tort litigation: (1) how much litigation there is; (2) whether jury awards are stable or out of control; and (3) how much litigation costs and who gets the money. The research suggests that discrepancies among the statistics on tort litigation can be explained by the fact that there is no longer, if there ever was, a single tort system. Instead, there are at least three types of tort litigation, each with its own class of litigants, attorneys, and legal dynam-

ics. The three types of torts are routine personal injury torts (e.g., auto suits), high-stakes personal injury torts (e.g., product liability, malpractice, and business suits), and mass latent injury cases (e.g., asbestos litigation). Each of these areas is characterized by a different litigation growth rate, jury verdict trend, and cost profile, and treating them together—as is done whenever overall statistics for tort litigation are reported—produces a distorted picture. 34 pp.

R-3585-ICJ Dispute Resolution Following Airplane Crashes. E. M. King, J. P. Smith. 1988.

This report summarizes results of legal actions that claimants pursued to recover their losses in major aviation accidents. In particular, it attempts to determine why some cases settle early and others do not. The authors describe the elements that distinguish air-crash litigation. They discuss the simple correlation between economic loss suffered and litigation process pursued, the theory behind the empirical models, and the operational definition of the empirical variables. The analysis indicates that, where large losses to survivors were involved, claimants were more likely to sue, to go to trial, and to have longer time to closure, indicating that the stakes are important in determining which cases make greater demands on the tort system. (See also R-3421, R-3549, R-3551, R-3684, N-2773.) 56 pp. Bibliog.

R-3602-ICJ The Legal and Economic Consequences of Wrongful Termination. J. N. Dertouzos, E. Holland, P. A. Ebener. 1988.

Although there has been an uproar over wrongful termination litigation, the aggregate legal costs are not large, even compared with the number of involuntarily terminated employees who are not otherwise protected by collective bargaining agreements, civil service regulations, or explicit employment contracts. The direct costs may understate the effects of wrongful termination suits. The fear of such suits could prevent managers from being flexible in adjusting to business cycles, new investment opportunities, or evolving technologies. In response to wrongful termination suits, administrative costs may rise substantially. Costly procedural changes could be balanced by benefits stemming from more efficient utilization of human resources, making everyone better off. 73 pp. Ref.

R-3668-ICJ Product Liability and the Business Sector: Litigation Trends in Federal Courts. T. Dungworth. 1988.

This report analyzes the product liability litigation that occurred in federal district courts from mid-1973 through mid-1986. It attempts to clarify the debate over whether product liability litigation has involved thousands of companies and products and therefore damaged U.S. business, or whether such litigation has consisted primarily of "epidemics" of suits limited to a few products and affecting only a few businesses. It considers how many companies have been involved in federal product liability litigation and to which industry groups they belong; and it examines the patterns exhibited by federal product liability filings since the mid-1970s. The most important general conclusion is that there is significant diversity among defendants, among industries, and even within industries. In particular, a dis-

inction must be drawn between the tiny number of defendants named in thousands of suits, and the thousands of defendants named only once or twice. Policy and law developed to deal with the situation must recognize that an approach that seems suitable for one facet of litigation may be inappropriate for another. 79 pp.

R-3676-ICJ Alternative Adjudication: An Evaluation of the New Jersey Automobile Arbitration Program. R. J. MacCoun, E. A. Lind, D. Hensler, D. L. Bryant, P. A. Ebener. 1988.

In 1985, New Jersey implemented a statewide program of mandatory court-administered arbitration of automobile injury lawsuits. In order to evaluate the program, the Institute for Civil Justice (ICJ) examined court records for a random sample of more than 1,000 auto negligence cases filed in either 1983 (pre-arbitration) or 1985 (post-arbitration), and surveyed approximately 300 litigants and 400 attorneys. No significant changes in trial rates or litigation costs were found. However, the program has had some unanticipated effects. Cases that are assigned to the program are significantly less likely to settle privately without a third-party hearing and, on average, take significantly longer to terminate than in the pre-arbitration period. Both litigants and attorneys evaluate arbitration hearings quite favorably. It appears that the program is providing disputants greater access to third-party hearings, but not greater efficiency. 134 pp. Ref.

R-3684-ICJ Executive Summaries of the Aviation Accident Study. J. S. Kakalik, E. M. King, J. P. Smith, M. Traynor, P. A. Ebener, L. O. Picus. 1988.

In 1985, RAND's Institute for Civil Justice undertook a detailed study of aviation accident litigation in the United States. This report summarizes the resulting four detailed study reports. It describes the characteristics of the decedents and the litigation, and provides data on compensation paid, litigation costs, and economic losses suffered. The report compares the economic losses and transactions costs with the amount of compensation paid. The findings indicate that airlines and other defendants compensated victims' survivors for less than half of their average economic loss. The findings also indicate that aviation accident litigation has higher transactions costs than tort litigation in general, but a lower ratio of transactions costs to total expenditures. (See also R-3421, R-3549, R-3551, R-3585, N-2773.) 64 pp.

R-3708-ICJ The Perception of Justice: Tort Litigants' Views of Trial, Court-Annexed Arbitration, and Judicial Settlement Conferences. E. A. Lind, R. J. MacCoun, P. A. Ebener, W. L. F. Felstiner, D. Hensler, J. Resnik, T. R. Tyler. 1989.

This report investigates the attitudes and perceptions of individual plaintiffs and defendants in personal-injury tort cases in three state courts. Specifically, it investigates how tort litigants' impressions of fairness and satisfaction with their experiences in the civil justice system are affected by hearing procedures, case events, and the litigation process. The authors found that the three third-party procedures studied—trial, court-annexed arbitration, and judicial

settlement—differed considerably in the procedural fairness and satisfaction ratings they engendered: arbitration hearings and trials were viewed more favorably than were settlement conferences. The findings suggest that improvements in perceived justice and satisfaction are more likely to come from changes in the tone of the judicial process than from innovations designed to cut costs or reduce delay. Further, innovations intended to reduce costs and delay should not do so at the expense of those qualities of the judicial process that are more important to litigants. 93 pp. Ref.

R-3838-ICJ Understanding Superfund: A Progress Report. J. P. Acton. 1989.

The Superfund program, established by Congress in 1980 and reauthorized in 1986, is intended to handle emergencies arising from the release of hazardous wastes, to provide long-term cleanup for a limited number of sites, and to encourage more responsible disposal of hazardous wastes in the future. This report provides an overview of the Superfund program, its legal basis, and its sources of funds; presents a concise description of incentives and the major administrative steps taken in their application; provides an overview of the major indicators of program effect based on public data available from the Environmental Protection Agency and other selected sources; presents a short interpretation of some of the most interesting or puzzling findings; and outlines statistics and attempts to capture costs and activities for each of the major groups participating in the Superfund process. 65 pp. Ref.

NOTES

N-1725-HHS Some Statistical Evidence on Merit Rating in Medical Malpractice Insurance. J. E. Rolph. June 1981.

Merit rating is not widely used in setting medical malpractice insurance premiums. A statistical analysis of two different datasets shows that actual malpractice claims experience is inconsistent with the notion that claims occur randomly among physicians within each specialty class. Consequently, a statistical model allowing physician specific claims propensities is fit to a recent dataset. Calculations using this model indicate that the additional effect of four years of a physician's claims experience on his or her expected claims rate is comparable to the effect of knowing the physician's medical specialty. Consequently, merit rating deserves more serious attention in medical malpractice insurance. 23 pp. Ref.

N-1735-NSF The Distribution of Power in the U.S. Supreme Court. A. Q. Frank, L. S. Shapley. July 1981.

The distribution of power among the nine justices of the U.S. Supreme Court is calculated using techniques of factor analysis in conjunction with a generalized Shapley-Shubik power index that takes into account the ideological or philosophical profiles of the voters. A three-dimensional profile

space is constructed, based on data from the 1977-78 term. It is found that, because of his central position in this space, Justice Powell has the highest probability—about 35 percent—of being pivotal in a typical decision. 27 pp. Ref.

N-1985-ICJ Court-Administered Arbitration: An Alternative for Consumer Dispute Resolution. D. Hensler, J. W. Adler, G. J. Rest. February 1983.

This Note presents the preliminary results of a year-long study of the Pittsburgh (Allegheny County Court of Common Pleas) arbitration program. It seeks to understand how litigants fare in such a program, which seeks to deliver "rough justice" in a highly efficient fashion. This Note summarizes the findings to date, highlighting issues that may be of particular concern to those interested in consumer dispute resolution. The findings are based on analyses of court record data for a sample of cases filed in arbitration in 1980 and 1981, and on interviews with litigants whose cases were heard in 1982. 25 pp. Ref.

N-1984-ICJ Jury Awards and Prejudgment Interest in Tort Cases. S. J. Carroll. May 1983.

This Note reports the preliminary results of research which empirically examines issues central to the prejudgment interest policy debate. The work thus far establishes that juries are implicitly awarding prejudgment interest. The analysis is based on data on all awards returned in civil jury trials in the federal, state, and municipal courts in Cook County, Illinois, from 1960 to 1979 relating to injuries arising from automobile accidents (1,349 cases). Controlling for the severity of injury, it was found that, on average, juries increased awards over and above inflation as measured by the Consumer Price Index at a rate of 3.7 percent per year for the time between injury and trial. Overall, juries implicitly provide prejudgment interest at a rate equal to the underlying inflation rate plus 3.7 percent per year. The Note addresses the implication of these effects for the policy debate about prejudgment interest. 47 pp.

N-2086-ICJ California Enacts Prejudgment Interest: A Case Study of Legislative Action. A. J. Lipson. January 1984.

This Note presents a case study of one of the most controversial actions of the 1981-1982 California legislative sessions: passage of mandatory prejudgment interest on personal injury awards (SB 203). This law entitles successful plaintiffs to interest, which accrues prior to judgment from the date of the first offer to compromise which is exceeded by judgment, to the date of the satisfaction of the judgment. The study sheds some light on the politics of tort reform in California. Section II reviews the major contested issues and how they were received in the legislature. Section III analyzes the political dynamics that help to explain passage of this bill, considers the role of analysis in the debate, and finally draws some conclusions and generalizations from the exercise. 31 pp.

N-2186-ICJ Court-Ordered Arbitration: The California Experience. E. S. Rolph, D. Hensler. July 1984.

This Note, a shortened version of a study published as R-2733-ICJ, examines the experimental court-ordered arbitration program established in California in 1979, in an effort to determine whether court-ordered arbitration reduces court congestion and backlogs; whether it cuts costs, by how much, and to whom; and whether participants, both litigants and attorneys, like the program. The authors found California's year-old program to be a modest success: it provides some objective benefits, particularly to courts, and it seems to hurt no one. 18 pp. Ref.

N-2257-ICJ Court-Annexed Arbitration: The National Picture. P. A. Ebener, D. M. Betancourt. February 1985.

This Note reports the findings of a national survey to determine the current status of court-annexed arbitration among state and federal trial courts, and is an update of a similar survey conducted by The Institute for Civil Justice in 1980, and published as R-2732-ICJ. Since then, the number of jurisdictions around the country that authorize court-annexed arbitration has doubled. Currently sixteen states have authorized arbitration programs and all but two of those have active programs under way in one or more major courts. On the federal side, eight additional districts are implementing court-annexed arbitration programs, bringing the total to ten. There is considerable variation among the programs: the upper limit on the value of cases eligible for the program varies from \$3,000 in Alaska to \$150,000 in a number of the federal district courts. Other features, such as the disincentive to appeal arbitrator awards, the number of arbitrators and their rate of compensation also vary among jurisdictions. Eight more states are considering court-annexed arbitration programs, and 26 states reported that current demand on judicial resources did not warrant such a program. Appendixes provide copies of authorizing legislation and examples of state and local court rules. 350 pp.

N-2342-ICJ Punitive Damages: Preliminary Empirical Findings. M. A. Peterson. August 1985.

This Note presents preliminary information on punitive damages awarded between 1959 and 1984 by juries in Cook County, Illinois, and San Francisco County, California. Findings confirm widespread perceptions that punitive awards have become both more frequent and larger, although only 45 percent of large punitive awards were actually paid by defendants. Punitive awards occur most frequently in trials involving intentional tort claims (assault, discrimination, and defamation), but trends have been stable for those cases. Punitive awards are less frequent for business torts or breach-of-contract claims, but the number and size of such awards have grown steadily, increasing greatly in the 1980s. Punitive awards were rare for personal injury cases based on negligence or strict liability but increased greatly in the 1980s in Cook County. Most punitive awards were against individual defendants, but businesses were assessed far larger awards. 49 pp. Ref.

N-2418-ICJ Limiting Liability for Automobile Accidents: Are No-Fault Tort Thresholds Effective? J. K. Hammit, J. E. Rolph. October 1985.

"No-fault" automobile insurance plans are designed to supplant the tort system by requiring motorists to purchase no-fault insurance and allowing victims to file liability insurance claims and tort suits only if their injuries exceed a legislated "tort threshold." While thresholds vary among states, many are satisfied if the victim incurs medical expenses as low as a few hundred dollars. Using insurance claims data, the authors estimate the effectiveness of several states' thresholds. They find that tort thresholds are surprisingly effective: modest tort thresholds reduce the number of successful tort claimants by half, and the strictest thresholds may exclude nine-tenths of potential claimants. Moreover, they find little evidence of claimants "padding" their claims to exceed the dollar thresholds. This Note is a reprint of an article that appeared in *Law & Policy* in October 1985. 15 pp. Ref.

N-2444-ICJ What We Know and Don't Know About Court-Administered Arbitration. D. Hensler. March 1986.

This Note, a reprint of an article that originally appeared in the February-March 1986 issue of *Judicature*, summarizes the results of research conducted by the Institute for Civil Justice in the area of court-administered arbitration. It describes what has been learned to date, and identifies some issues that remain to be examined: (1) the kinds of cases that are not good candidates for arbitration; (2) the factors that affect decisions to appeal; (3) the effect of arbitration on settlement; and (4) the effect of arbitration on the practice of law. 8 pp.

N-2671-ICJ Getting Inside the Black Box: Toward a Better Understanding of Civil Jury Behavior. R. J. MacCoun. December 1987.

This paper advocates the use of systematic empirical research on civil jury behavior as an important tool in the policymaking process. The author discusses the methods that have been used for studying jury behavior, summarizes major findings of previous research (primarily on criminal juries), and considers what various research strategies can contribute to our understanding of jury behavior. In particular, he emphasizes the importance of mock jury experiments for explaining patterns identified in archival analyses and for testing the effects of proposed policy changes. In addition, he outlines four topics that should be given high priority on the research agenda: (1) identify the processes that have brought about the apparent patterns of inequity identified in archival analyses of jury verdicts; (2) examine the relationship between damages and liability; (3) study the effect of special or itemized verdict forms on the deliberation process, and how accurately they represent the jurors' actual judgments; and (4) assist the courts in improving the structure of the trial and the decision task. 49 pp. Ref.

N-2773-ICJ Aviation Accident Litigation Survey: Data Collection Forms. J. S. Kakalik, E. M. King, M. Traynor, P. A. Ebener, L. O. Picus. 1988.

In 1985, RAND's Institute for Civil Justice undertook a detailed study of aviation accident litigation in the United States. The study covered the general character of aviation accident litigation; reviewed the underlying principles and procedures used to compute the economic loss associated

with individual decedents; described the characteristics of the decedents and compared the compensation paid to their survivors with the levels of economic loss they suffered; and analyzed the legal and economic determinants of the litigation decisions that plaintiffs and defendants faced. This Note contains the forms used to compile the data used in the various analyses. (See also R-3421, R-3549, R-3551, R-3585, R-3684.) 85 pp.

N-2805-ICJ Resolution of Mass Torts: Toward a Framework for Evaluation of Aggregative Procedures. M. A. Peterson, M. Selvin. 1988.

The civil justice system is increasingly being asked to resolve disputes between large aggregations of plaintiffs and defendants. This mass litigation is placing considerable strain on a system whose formal and informal procedures and practices are based on expectations about traditional disputants that no longer necessarily hold. Some formal mechanisms, such as class actions and multidistricting, have been devised to deal with certain classes of mass litigation, but there are questions about when and how they should be applied. This Note presents the Institute for Civil Justice's (ICJ) agenda for a program of research on mass tort litigation, and the results of ICJ work to date. The analysis explores the effects of aggregation on the characteristics, course, and outcome of mass litigation. 70 pp. Ref.

N-2807-ICJ The Economic Consequences of Expanded Corporate Liability: An Exploratory Study. P. H. Reuter. November 1988.

The legal liabilities facing U.S. corporations have expanded substantially over the last decade. Traditional liabilities, notably those associated with defective products, have become more stringent, while new liabilities, particularly those associated with hazardous waste disposal and the discharge of employees, have emerged. The corporate sector has expressed considerable concern about the impact of these new liabilities on the economic performance of the nation, arguing that they have significantly reduced the productivity and international competitiveness of U.S. firms. This Note presents a framework for analyzing how expanded liability might affect such outcomes as productivity and international competitiveness and offers some preliminary evidence on the impact of expanded liabilities on the behavior of corporations. The Note is based in part on a review of existing studies, and it also incorporates the results of interviews with a number of corporate officials involved in liability-related matters. 54 pp. Ref.

N-2903-ICJ Judicial Arbitration in California: An Update. D. L. Bryant. June 1989.

In 1979, California instituted one of the most ambitious court-based alternative dispute-resolution programs in the country. In an effort to reduce congestion on the civil trial calendars, the legislature required litigants in the state's largest courts to submit their cases to nonbinding arbitration. Over the years, the jurisdiction of the program has been expanded, so that all cases involving money damages of \$50,000 or less that are filed in the state's 16 largest court jurisdictions must attempt arbitration before they will be allowed to proceed to trial. This Note reports the

findings of a 1987 survey of court officials undertaken to determine the status of California's judicial arbitration program. It also describes how local courts have implemented the program, analyzes selected program outcomes, and examines program trends. 48 pp.

RAND MEMORANDA

RM-5631-DOT Putting the Analysis and Evaluation of Traffic Safety Measures into Perspective. M. Wohl. April 1968.

An appraisal of the benefits and costs of traffic safety measures, both in aggregative and differential terms. Operationally, the traffic safety problem is to determine the aggregate levels of benefit and cost associated with the adoption of safety measures and to determine who will benefit from these measures and how much, and who will pay for them and how much. An examination of three safety measures—seat belts, side-marker lights, and controls on drinking drivers—shows that (1) safety per se should not be viewed in isolation; (2) society should not regard safety as a necessary good regardless of all else; (3) governmental intervention or control is not always necessary and, in some cases, may tend to undermine the public welfare; (4) the mere lack of safety progress on the part of the automotive industry does not indicate a lack of proper motives; and (5) equity issues surround the traffic safety problem. (See also RM-5632, RM-5633, RM-5634, RM-5635, RM-5636, RM-5637.) 51 pp.

RM-5634-DOT Vehicle Safety: Why the Market Did Not Encourage It and How It Might Be Made To Do So. A. Carlin. April 1968.

An analysis of the reasons why the market mechanism has not proved effective in promoting vehicle safety and of possible ways that market forces might be used to create a greater demand for safety in the future. Because consumers have shown little interest in vehicle safety features and because manufacturers have found that safety doesn't sell, the market has not operated to raise safety standards. This situation might be changed (1) by increasing the public's ability to distinguish the relative safety of different models of cars by either a hierarchy of easily understood Federal vehicle safety standards or direct comparisons or ranking of relative vehicle safety; or (2) by creating greater incentives for the public to demand safer cars or to install and use safety equipment. (See also RM-5631, RM-5632, RM-5633, RM-5635, RM-5636, RM-5637.) 28 pp.

RM-5636-DOT Medical Problems and Physical Fitness as Related to Occurrence of Traffic Accidents. H. H. Mitchell. April 1968.

A survey of the literature on medical problems and physical fitness as they relate to the occurrence of traffic accidents. The published data do not provide sufficient evidence for an estimate to be made of the contribution of various medical conditions to the accident rate. There are also insufficient

quantitative studies to form a rational basis for action by regulatory authority in charge of licensure for driving. If done at all, the current screening of drivers before licensure is apparently based on qualitative medical judgment. It is suggested that controlled studies be made to evaluate the contribution to the accident problem of the various medical conditions that might be significant, for example, epilepsy, diabetes, cardiac disease. These studies should determine the effect on the accident rate of removal of specified categories of diseased individuals. Particular attention should be paid to the number of licenses that would have to be denied for each category studied. (See also RM-5631, RM-5632, RM-5633, RM-5634, RM-5635, RM-5637.) 30 pp.

RM-5873-DOT Safety in Transportation: The Role of Government, Law, and Insurance. L. B. Lave. April 1969.

An analysis of how an optimal level of transportation safety can be achieved in terms of various roles of current institutions. Transportation safety results from the interaction of passengers, government, law, and insurance. The unique role each plays in optimizing safety is investigated with the ultimate objective of identifying the role of government and regulation in accomplishing society's safety goals. While liability laws and insurance have well-defined roles in optimizing transportation safety, government is something of a residual claimant. Depending on the particular circumstances, government might be called upon to do nothing or to settle everything by fiat. It is reasonable to assert that whenever there are important deviations from optimal safety, government has some obligation to find a way of correcting the situation. The solutions open to government take three basic forms: help perfect the market directly, create institutions to perfect the market, or correct the deviation by fiat. 44 pp.

RM-6309-FF Cable Television: The Problem of Local Monopoly. R. A. Posner. May 1970.

This study probes advantages and disadvantages of alternative forms of local cable television regulation. With the scramble among cable operators for municipal franchises growing, so is concern about local monopoly—the potential for abridging the public interest through excessively high subscriber fees and direct channeling of huge profits into the hands of cable companies who successfully compete for the right to "wire up" individual communities. Among variants of the franchise approach discussed: city governments could require reasonable subscription fees, place a ceiling on profits, or require a suitable array of services. The author urges a period of experimentation with a variety of the options available for both preventing monopoly prices and capturing monopoly profits for the public—and, because of current uncertainty over future CATV characteristics, for examining the actual extent of the monopoly problem. 42 pp.

PAPERS

P-4285 Law as a Tool of Directed Social Change: A Framework for Policymaking. Y. Dror. January 1970.

The use of law as a tool for directed social change is widespread in all contemporary societies, but systematic procedures and understanding are lacking. Only a complex multivariable behavioral analysis can provide the knowledge necessary for wise policy recommendations. The task requires mixed teams of lawyers, social scientists, and policy analysts at various points in the social guidance cluster—the legislature, the executive, research organizations, and universities. It also calls for changes in the policymaking system to permit utilization of the work of such teams, through a broader, more systematic approach to policymaking in general. This, in turn, requires changes in higher education to provide (1) analytical and social science training in the law schools, and (2) special institutes at which interested lawyers, social scientists, and policy analysts acquire a grounding in each other's skills. (Prepared for publication in *The American Behavioral Scientist*, Spring 1970.) 12 pp.

P-4448 Comparing Behavior at Various Computer Display Consoles in Time-Shared Legal Information. J. H. Carlisle. September 1970.

An experiment at Yale Law School in searching for legal precedents on the Mead Data Central time-shared information retrieval system. Subjects used either a teletype or the complicated-to-use CCI video console to access the 300,000,000 character Ohio Bar Association database. The UCLA BIOMED multiple discriminant program was used to analyze the results. Contrary to expectations, subjects spent more time at the video console, despite the longer transmission time of the teletype. More cases were retrieved and browsed at the video console, relevance scores were higher, and subjects were more satisfied. They also made 300 percent more errors. Relevance correlated highly with number of cases retrieved and negatively with time spent searching—contrary to the beliefs of system designers who limit retrieval to save time. Those who retrieved least information took the longest time and achieved the lowest relevance scores. The negative relation between time and relevance is even more marked for the video console users. 46 pp. Ref.

P-4709 The Design and Evaluation of Experimental Court Reforms. J. B. Jennings. October 1971.

As new ideas are generated for dealing with court congestion and other criminal justice problems, those that appear to be the most promising must eventually be tested in practice. However, it is difficult to determine whether there is any resulting improvement. Accordingly, this paper is addressed to considerations of experimental design, the selection of evaluation criteria, the measurement of court performance, and the assessment of the results of such a test. The principles introduced are discussed in terms of an ongoing evaluation of a major internal reorganization of the New York City criminal court. 21 pp.

P-4732 A Theory of Court Scheduling. J. B. Jennings. October 1971.

A relatively simple, analytical model of court scheduling is introduced and analyzed. The model is based on a representation of the process by which cases not disposed of at any appearance are scheduled for another appearance. This representation, although deterministic, possesses many of the important properties of court operations. Using this model, analytical expressions are derived for the number of cases scheduled to appear in each portion of the court each day, the steady-state calendar size in each part, the sizes of future calendars and case backlogs, and the average duration of and the average number of appearances made by each case. In addition, the effect of a dependence of certain processing parameters on the number of cases scheduled is investigated. 46 pp.

P-4928 Public Policy, Public Good, and the Law. P. L. Szanton. December 1972.

American government, formerly concerned with regulating private behavior, has increasingly undertaken a more positive role: to improve schooling, build housing, provide health care, and the like. In doing so, it has normally relied not on the imposition of regulation, but on the allocation of resources. Accordingly, many governmental positions formerly filled by lawyers are now occupied by persons with quantitative analytic backgrounds. This paper examines the contributions lawyers may still make to public policy and public good. It concludes that (1) elective offices will continue to be dominated by lawyers, (2) lawyers have important perspectives to contribute to policy-making, (3) a large percentage of the professionals available for government service will continue to be lawyers, (4) the private practice of law is entering a period in which needed reform will be possible, and (5) lawyers will need greater familiarity with quantitative analysis and the techniques of planning and management. 13 pp. Ref.

P-5041 Evaluating Administrative Court Reforms. J. B. Jennings. June 1973.

A set of broad administrative objectives is tentatively suggested for a criminal court. Some of these are aimed at improving the quality of justice, some at reducing the burden imposed by administrative procedures on individuals and agencies, and some at increasing efficiency. The success of any administrative reform should be evaluated in terms of a precise set of objectives such as these. While, in many instances, the evaluation must be subjective in nature, a set of objective criteria, or measures of performance, should be used wherever possible. Appendix I is a glossary of court-related terms used. Appendix II derives three formulas for estimating case flow through the courts, developed for and used by the Criminal Court of the City of New York. 26 pp.

P-5526 The Relationship between Medical Malpractice and Quality of Care. R. H. Brook, R. L. Brutoco, K. N. Williams. October 1975.

Examines the impact of present and future malpractice systems on the quality of medical care. The paper is divided into four parts: (1) consideration of quality-of-care constructs; (2) an overview of those issues of medical malpractice which are pertinent to quality-of-care considerations; (3) examination of the relationship, both theoretical and empirical, between malpractice and quality-of-care; and (4) development of policy and research suggestions for understanding and altering the current malpractice system. The idea was advanced that sanctions on providers for malpractice should be separate from mechanisms for reimbursement of patients for injuries from that malpractice. The current Professional Standards Review Organization program should be strengthened by including both the public and health providers other than physicians, by covering both ambulatory and hospital care, and by extending its authority to sanction providers. 39 pp. Ref.

P-5752 Results of YLS Survey on Specialization/Relicensing. M. A. Peterson. November 1976.

A survey of readers of *Barrister Magazine* shows support among young lawyers for programs to recognize legal specialties and relicense lawyers. Respondents valued specialization both as a means for providing better legal services and as an attractive feature for lawyers. They showed a strong preference for programs of certification rather than self-designation, requiring attendance at continuing legal education courses and some form of screening to determine which lawyers should be recognized as specialists. Most were willing to grant recognized specialists special opportunities to inform the public of their specialty status. Despite this support for specialization programs, some lawyers indicated concern that specialization programs would adversely affect their own practice. There was also strong support for relicensing programs. Most felt that lawyers need to improve or refresh their substantive knowledge of the law and the professional skills used in legal practice. They also supported mandatory continuing education courses to improve the quality of legal practice. 14 pp.

P-5766 Causes of the Medical Malpractice Insurance Crisis: Risks and Regulations. P. Munch. December 1976.

Analyzes the causes of the recent dramatic increase in malpractice insurance rates and contraction of the market in risk spreading, exemplified by the withdrawal of commercial carriers from some states, the growth of physician-owned mutuals, and the switch from an occurrence to a claims made policy form. Some of these institutional changes appear consistent with an efficient market response to the changed nature of the risk involved in writing malpractice insurance—in particular, increased frequency and severity of claims, instability of the sociolegal environment, depletion of insurers' net worth, and lower mean and higher variance of return on reserves. Total withdrawal of commercial carriers can only be explained by regulatory control of rates and reserve requirements, exacerbated by medical society resistance to selective underwriting, deductibles, and experience rating. 38 pp. Bibliog.

P-5877-1 Experience Rating in Medical Malpractice Insurance. C. E. Phelps. June 1978.

Argues that experience-rate pricing of medical malpractice insurance could be a useful quality-control device by forcing bad doctors to pay insurance rates reflecting the true costs of malpractice. Available data show that, for four years, 8,000 physicians in Los Angeles sustained 575 suits annually. There were 46 physicians sued four or more times. If all 8,000 doctors had identical probabilities of being sued, the number with four consecutive years of suits would be .21, not 46. If 2,000 of the 8,000 are in high-risk specialties, then of the 2,000 only four are expected to sustain four suits, not 46. The data demonstrate dramatically that the doctors with multiple suits were indeed drawn from a different distribution than their colleagues. The author concludes with some conjectures on why doctors continue to choose malpractice insurance that does not reflect actual claims histories. 7 pp.

P-5885 Some Comments on De Facto Limits on Liability. K. A. Solomon, D. Okrent. June 1977.

An overview of large technological systems in society to ascertain the prevalence of situations that can lead to catastrophic effects where the resultant liabilities far exceed the insurance or assets subject to suit in court, thereby imposing de facto limits on liability. Several potential situations are examined, including dam rupture, aircraft crash into a sports stadium, chemical plant accident, shipping disaster, and a toxic drug disaster. These events are estimated to have annual probabilities similar to or larger than a major nuclear accident. All are found to involve potential liability far exceeding the available resources, whether they be insurance, corporation assets, or government revenues. If limits on liability represent an important problem for society, the problem is general and should be dealt with from that perspective. 24 pp. Ref.

P-5921 Costs and Benefits of the Tort System if Viewed as a Compensation System. P. Munch. June 1977.

Compares the costs of operating the tort liability system for four major branches of tort law: product liability, automobile liability, workers' compensation, and medical malpractice. Liability premium costs are compared to the relevant industry revenue and the estimated cost of injuries. The allocation of the premium dollar among claimants, claimant and defense litigation costs, and insurance overhead is estimated. The paper is not intended as an overall evaluation of the tort system since it excludes such items as any reduction in injuries attributable to the deterrent effect of liability for negligence, and other costs not reflected in insurance premiums. 95 pp. Bibliog.

P-5940 More on Insurance and Catastrophic Events: Can We Expect De Facto Limits on Liability Recoveries? K. A. Solomon, C. Whipple, D. Okrent. March 1978.

Reviews large technological systems to locate situations that have potential for catastrophes in which liabilities exceed insurance or assets, thereby imposing de facto limits on liability recoveries. Such events as an LNG explosion in a population center, or massive nuclear reactor accident

near a population center are found to involve potential liability far exceeding available resources, whether they be insurance, corporate assets, or the annual budget of the Federal Disaster Assistance Administration. Liability limits, whether by law or de facto in nature, appear to be prevalent in society. They represent a problem which should be solved in a coordinated way, and include other issues that have been raised, such as the possible loss of incentive for safety improvements. 26 pp. Ref.

P-5948 The Youngest Minority: Are They Competent To Waive Their Constitutional Rights? S. T. Brewer. March 1978.

Discusses the constitutional rights accorded to juvenile offenders. The author asserts that concern for a juvenile's needs rather than his rights deprives him of the constitutional right to fairness and due process of law accorded to adult offenders. A defense often raised in juvenile confession cases is that a minor is not competent to waive his constitutional privilege against self-incrimination. The rationale behind this proposition is that a minor is generally regarded as unable to enter into legal transactions and is presumed to lack the requisite intelligence to make a valid waiver. The author urges that stricter criteria should be established for a waiver to be held valid. A juvenile often doesn't know the importance of confessions in gaining convictions until he has provided the state with its best evidence against him. 22 pp. Ref.

P-5975 Witnesses' Perception of Meaning. M. A. Peterson. August 1977.

Subjects presented with a videotape of a fight and disruption perceived the event in terms of meaningful generalizations. The conclusions that subjects formed remained stable over 28 days. In contrast, detailed memory rapidly deteriorated for subjects who were not required to rehearse their memory of the event. As a result, subjects increasingly reported recognizing details that supported and apparently were inferred from their general conclusions. The study showed that subjects' conclusions about meaning affect their selective attention to detail, and subjects who expected violence and disruption formed more certain general conclusions. Finally, the study indicated that repeated rehearsal may promote and even enhance accurate memory for meaningful information. Among rehearsing subjects accuracy of recognition for meaningful information showed a significant quadratic trend—increasing through seven days before returning to the original level after 28 days. Over the same period accuracy for irrelevant information showed the usual negatively accelerated trend. 16 pp. Ref.

P-6037 The Chicano/Illegal-Alien Civil Liberties Interface. A. Gandara. November 1977.

Examines how concern over illegal Mexican migration has resulted in judicial and statutory responses that constrain the constitutional and civil rights of Chicanos. The author reviews major Supreme Court decisions which resulted in judicial approval of violations of the fourth amendment right of persons to be free from unreasonable searches and seizures if those persons appear to be of Mexican ancestry. Also reviewed is the Carter amnesty plan which intends to

make hiring of illegal aliens unlawful, thereby raising Chicano concern that employers would be deterred from hiring Chicanos as well. The Carter plan addresses this concern by calling for full enforcement of existing anti-discrimination laws. The author points out that the protection against employment discrimination offered by the Civil Rights Act of 1964 or the broader Act of 1866 is insufficient or uncertain and that the Carter plan should be modified to include specific statutory protection against such discrimination. (A Spanish language version is available in P-6037/1.) 17 pp. Ref.

P-6349 Solvency Regulation in the Property/Casualty Insurance Industry. P. Munch, D.E. Smallwood. June 1979.

Outlines current policy issues relating to solvency regulation, describes existing regulation and then estimates its effects. Cross section analysis is used to estimate the effect of regulations on the number of companies operating in a state and the frequency of insolvencies. Minimum capital requirements appear to reduce the number of insolvencies only by deterring small firms with a higher probability of failing from entering the market. Other forms of regulation have no effect on entry or insolvencies. The value of solvency regulation to consumers thus depends on whether the net value of firms that are deterred from entry is positive and exceeds the administrative cost of regulation. Comparison of the characteristics of solvent and insolvent firms provides evidence that is consistent with a model of insolvency as the (unlucky) outcome of wealth-maximising risk taking, rather than simple fraud. 73 pp. Bibliog.

P-6693 A Suggestion for Improving the Research Methodology of Rule-Based Modeling. S. W. Salant. December 1981.

This paper explains why the methodology proposed by Waterman and Peterson (R-2717-ICJ) to study the process of legal settlements is vulnerable to the same criticism that Lucas has made so forcefully about econometric policy evaluations. It goes on to propose an alternative methodology which does not suffer from this weakness. The alternative involves viewing the settlement process as a game. The paper assumes familiarity with neither Lucas' critique nor the theory of games. A companion paper (P-6809) illustrates how to implement the methodology proposed here. It considers strategic interactions in the settlement of personal injury claims in which information about the severity of the injury is known (and known to be known) only to the injured party. 16 pp. Ref.

P-6800 Settlement Out of Court: The Disposition of Medical Malpractice Claims. P. M. Danzon, L. A. Lillard. July 1982.

The main purpose of this paper is to present empirical estimates of a model of the disposition of claims through the courts. A second purpose of the paper is to provide evidence relevant to the policy debate over tort reform. The theoretical model is described in Sec. 2. Section 3 discusses estimation and describes the data. Section 4 reports empirical results, including goodness of fit of the model and parameter estimates. Section 5 provides estimates of the

probability of winning at verdict for cases settled out of court. Section 6 analyzes the discrepancy between mean award at verdict and settlement and the extremely skewed distribution of dollar payout. Section 7 discusses the effects of actual and hypothetical tort reforms and simulates their ramifications on the entire disposition process. Section 8 contains concluding remarks. 55 pp.

P-6809 Litigation of Questioned Settlement Claims: A Bayesian-Nash-Equilibrium Approach. S. W. Salant, G. J. Rest. December 1982.

Before reforms in legal procedures are implemented, their consequences should be thoroughly explored. In this paper, the authors present a methodology for evaluating the consequences of changes in legal procedures. They consider legal settlements of personal injury disputes. Even though there are assumed to exist out-of-court settlements which both plaintiff and defendant would prefer to a court fight if they had complete information, such settlements may fail to occur because the defendant lacks complete information about the extent of the plaintiff's injuries and sometimes challenges demands he suspects to be inflated. The authors treat adversarial behavior in the settlement process as the strategic interaction of players in a game of incomplete information. To illustrate the value of the methodology, the authors conclude by showing how a seemingly innocuous exogenous change in legal procedures has a surprising qualitative effect on the behavior of defendants and consequently on how frequently cases go to trial. 27 pp. Ref.

P-6857 The Effect of Item Sequence on Bar Examination Scores. S. P. Klein, R. Bolus. April 1983.

This study investigated the degree to which scores on a test of certain legal research skills correlated with scores on the essay and multiple choice portions of a state's bar exam and with various background characteristics, including racial/ethnic group. Results indicated the Research Test reliably measured skills that were only partially correlated with those assessed by the regular bar exam. Research Test scores were more highly related to indexes of the ability to practice law than the traditional measures of lawyering skill. As a result of these findings, the bar exam now includes a Research Test. 5 pp.

P-6879 Measuring Legal Research Skills on a Bar Examination. S. P. Klein. May 1983.

Reports on an investigation of whether MBE and essay scores in bar examinations were good predictors of how well applicants could perform some of the day-to-day tasks that are required of practicing attorneys. One part of this study involved assessing the relationship between bar exam scores on a test that was designed to measure certain important legal research skills. The study also investigated whether differences in performance level among racial groups on the Research Test paralleled differences among these groups on the bar exam and whether Research Test scores were related to an applicant's legal training and experience. The findings indicate that the inclusion of a Research Test on the bar exam could make a small but important difference in who passes. And, while the use of a Research Test would not narrow the gaps in average perfor-

mance level among racial groups, neither would it increase the difference among these groups. 6 pp.

P-6895 Relationship of Bar Examinations to Performance Tests of Lawyering Skills. S. P. Klein. July 1983.

The relationship between scores on a typical bar exam and the ability to practice law was investigated with 485 applicants who took the bar exam and a two-day performance test involving basic oral and written legal tasks. Results indicated the two types of measures assessed similar but not identical skills. 6 pp.

P-6924 Experimental Studies of Bargaining as Analogues of Civil Disputes. J. P. Kahan. November 1983.

This paper reviews recent studies of experimental bargaining, largely conducted in social psychological laboratories, to obtain findings that might prove helpful to understanding the process of civil dispute resolution. Three research areas are surveyed: (1) the effect of third party intervention, (2) the effect of having representatives bargain in the stead of the central parties, and (3) the effect of negotiating multiple issues as packages. For each of these areas, the studies provide generalizations that suggest ways in which civil disputes might be more efficaciously settled. 42 pp. Ref.

P-6959 How Trial Fees Would Affect Civil Justice. C. P. Rydell. April 1984.

This analysis estimates how charging litigants, instead of taxpayers, for civil trials would affect the civil justice system in general, and poor people in particular. The analysis focuses on the economic impacts of trial fees: the monetary gains and losses experienced by plaintiffs, defendants, and taxpayers when trial fees are instituted. The study develops two models, one using a game-theory approach, the other a differential expectations perspective. The conclusion is that the effects of trial fees on plaintiffs and defendants are not very large (less than seven percent), due to the small proportion of civil cases that actually go to trial, and the relatively small size of court costs compared to total litigation costs (lawyer costs are much larger than court costs). 46 pp. Ref.

P-6963-ICJ Court-Annexed Arbitration in the State Trial Court System. D. Hensler. February 1984.

Research effort has been directed toward investigating the use of court-annexed arbitration in the state trial courts, and evaluating the effectiveness of this type of arbitration for managing the civil caseload and alleviating the burdens that the litigation process places on private citizens who bring their disputes to the courts for resolution. The testimony presented by the author to the U.S. Senate Judiciary Committee Subcommittee on the Courts deals with four topics: (1) the spread of court-annexed arbitration through the state trial court system; (2) variations in the design of court-arbitration programs nationwide; (3) the effectiveness of arbitration in reducing court congestion; and (4) how arbitration affects litigants. 12 pp.

P-7027-ICJ Reforming the Civil Litigation Process: How Court Arbitration May Help. D. Hensler. August 1984.

This paper, originally published in the *New Jersey Bell Journal*, Summer 1984, describes some factors contributing to the congestion, delay, and expense that currently trouble the country's civil courts. It describes court-administered arbitration, an approach that is being tested to resolve a broad range of civil cases involving money damages: personal injury and property damage suits, breach of contract cases, and collection disputes. It reviews the results of two RAND Institute for Civil Justice studies on the effectiveness of court-annexed arbitration, which found, among other things, that there were significant cost reductions, and there was a high degree of satisfaction with arbitration procedures among attorneys and litigants. 10 pp.

P-7057-RGI Comparative Negligence and Jury Behavior. M. Shanley. February 1985.

The law of comparative negligence provides that juries divide damages between the plaintiff and negligent defendants according to relative fault. The predecessor to this law, still in effect in nine states, is the contributory negligence law, which states that plaintiffs who contribute to their own injury in any way, should receive nothing. This paper examines the effect of the comparative negligence law with respect to the increase in awards to plaintiffs who take their case to trial. It analyzes 675 auto accident trials in San Francisco County in the 1970s, about half of which took place under the old contributory negligence law, and half under the new comparative negligence law. The analysis shows that the actual effect of the comparative negligence law is smaller than the potential effect, because juries don't strictly follow either law, but that it is still considerably higher than what current conventional wisdom would predict. 89 pp. Bibliog.

P-7073-ICJ Evaluating Civil Claims: An Expert Systems Approach. D. A. Waterman, M. A. Peterson. March 1985.

This paper, a reprint of an article that originally appeared in Vol. 1 of the journal *Expert Systems*, describes the authors' current work in applying expert systems, a sophisticated form of computer modeling, to describe reasoning involved in settlement of civil liability claims. The authors studied how lawyers and adjusters evaluate civil claims in the product liability area, and developed a schema that organizes the facts and issues of a case. The schema, and a large set of rules they use to elaborate the schema, form the basis for an expert system that models legal decisionmaking. This system, called LDS, can help both researchers and litigators understand better how claim evaluation takes place since it provides a basis for generating and organizing hypotheses about litigators' methods for making settlements. The findings suggest that rule-based expert systems can be developed and used to understand decisions involved in civil litigation; this information can be translated into the if-then rules of a rule-based model, and that model can capture much of the richness and flexibility of legal reasoning. 12 pp. Ref.

P-7089-ICJ Designing Safer Products: Corporate Responses to Product Liability Law and Regulation. G. C. Eads, P. H. Reuter. June 1985.

This paper, which appeared in the *Journal of Products Liability*, Vol. 7, 1985, is excerpted from a larger study with the same title, published as RAND report R-3022-ICJ. It analyzes ways in which firms have responded to recent changes in pressures to design safer products, based on interviews with product safety officials in major manufacturers and extensive analysis of legal and scholarly literature. Shifts to strict liability and more stringent regulation during the last 15 years have increased pressure to invest in safety assurance procedures, as evidenced by the creation of new corporate product safety units. Regulation has been of more questionable effectiveness than has strict liability in inducing better design practices. The authors argue that federal product liability legislation will have marginal effect, despite the current variation in state law on the matter; discuss the factors that influence the effectiveness of corporate product safety units; and suggest that combining product safety with quality assurance may be the optimal strategy for a firm. 32 pp. Ref.

P-7166 The Public Trust Doctrine in 1985. M. Selvin. December 1985.

This paper, originally written as a preface for the 1986 publication of the author's dissertation by Garland Publications, reviews developments in public trust litigation during the time since the dissertation was completed in 1978. The public trust doctrine states that tidelands and certain other lands and waters are held in trust by the citizens of the various sovereign states and municipalities, to be used only for the benefit of the general public. Recent trust litigation has focused, as before, on water-related resources including tidelands, beaches, lakes, and streams. Nonetheless, state courts have rendered several significant decisions during the past seven years, largely in California and New Jersey, expanding and in some instances limiting permissible trust uses of and trusteeship responsibilities over traditional trust properties, and extending the reach of the doctrine to resources not previously clothed with trust protections. 21 pp.

P-7180-ICJ The Impact of Fee Arrangement on Lawyer Effort. H. M. Kritzer, W. L. F. Felstiner, A. Sarat, D. M. Trubek. January 1986.

This paper focuses on the impact of fee arrangement on the amount of time lawyers are likely to devote to civil cases ("effort"). Drawing on data collected by the Civil Litigation Research Project, the authors compare the behavior of lawyers working on an hourly fee basis with the behavior of contingent fee lawyers. Like previous work on this issue, the paper finds that fee arrangement does influence the amount of effort lawyers devote to a given case. However, contrary to previous work, the analysis indicates that the impact is not a simple one on hours worked; there is a more complex effect on a number of aspects of lawyers' behavior. Together these produce an effect on hours that varies by size of case. For modest cases (with stakes of \$6000 or less), contingent fee lawyers spend less time on a case than hourly fee lawyers. Yet the authors find no statis-

tically significant evidence of a differential in effort for larger cases but rather an indication that, if there is an effect, it may be in the opposite direction. 28 pp. Ref.

P-7189-ICJ Some Observations on the Need for Tort Reform. G. H. Shubert. January 1986.

This paper was originally presented to the National Conference of State Legislatures in Denver, Colorado, in January 1986, and in an earlier version to the Public Policy Institute in Albany, New York, in November 1985. It draws on studies of civil court congestion and delay, alternative dispute resolution, the public costs of civil litigation, asbestos-related litigation, punitive damages, and medical malpractice. The author explores the relevance of policy research to tort reform, and concludes that the underlying problem with the civil justice system is the inability to decide whether we in the United States want to have a pure compensatory system, in which everyone is compensated for every injury no matter what its cause, or a fault-based liability system, in which compensation is limited in a strict way, in a comparative way, or in a contributory way to those who have caused the injury. 11 pp.

P-7210-ICJ Summary of Research Results on the Tort Liability System. D. Hensler. March 1986.

This paper was originally presented as testimony before the Consumer Subcommittee of the Senate Committee on Commerce, Science, and Transportation in February 1986. It presents results of research conducted by the Institute for Civil Justice relevant to the product liability system. It considers five areas of research: (1) trends in civil jury verdicts, particularly as they relate to product liability lawsuits; (2) effects of product liability lawsuits on corporate behavior; (3) public expenditures to process tort liability suits; (4) special problems posed by mass toxic lawsuits; and (5) the use of alternative dispute resolution procedures for resolving tort cases. 11 pp. Ref.

P-7211-ICJ The Effects of Tort Reforms on the Frequency and Severity of Medical Malpractice Claims: A Summary of Research Results. P. M. Danzon. March 1986.

This paper, originally presented as testimony before the Committee on the Judiciary of the United States Senate, reviews the results of three studies on the frequency and severity of medical malpractice claims. The findings of the three studies suggest that caps on awards and collateral source offset have significantly reduced claims severity; and collateral source offset and shorter statutes of repose have significantly reduced claims frequency. The author cautions that, from a public policy perspective, the goal of tort reform should not be simply to reduce the costs of claims and of malpractice insurance. Rather, reforms should be evaluated in the broader context of the fundamental purposes of the tort system, which are deterrence of medical negligence and efficient compensation of its victims. 11 pp. Ref.

P-7212-1 Refinements of Sequential Equilibrium in a Legal Settlements Game. J. K. Cave. March 1987.

This paper applies several refinements of sequential equilibrium to a signaling game of legal settlement, in which the informed plaintiff has a continuum of pure strategies. The principal results are that (1) such refinements can greatly reduce the scope of equilibrium behavior; (2) there is no necessary connection between divine and perfect equilibria; and (3) perfect, divine, and proper equilibria of games with continuous pure strategy spaces may use weakly dominated strategies with positive probability. 33 pp. Ref.

P-7222-ICJ A Summary of Research Results: Trends and Patterns in Civil Jury Verdicts. M. A. Peterson. March 1986.

This paper was originally presented as testimony before the Subcommittee on Oversight of the United States House of Representatives Committee on Ways and Means. It draws on the author's analysis of civil jury verdicts rendered between 1960 and 1979 in Cook County, Illinois, and San Francisco, California. The testimony focuses on trends and patterns over time, and on how the type of liability, nature and circumstances of injury, and characteristics of plaintiffs and defendants affect the outcomes of civil jury trials. 6 pp. Ref.

P-7241-ICJ Changes in the Tort System: Helping Inform the Policy Debate. G. H. Shubert. June 1986.

This paper is extracted from the Director's Report in the Institute for Civil Justice's (ICJ) *Report on the First Six Program Years, April 1980-March 1986*. It reviews findings of the ICJ's research on the civil justice system regarding (1) civil jury verdicts, (2) the private and public costs of civil litigation, and (3) the effectiveness of the processes of the system. This research underlines the need for policymakers to anticipate the impacts of legislative changes on costs, outcomes, and processes. In addition, it emphasizes the need to build into every reform the capacity to evaluate its actual impact and to provide for subsequent correction. 4 pp.

P-7243-ICJ Costs and Compensation Paid in Tort Litigation: Testimony Before the Joint Economic Committee of the U.S. Congress. J. S. Kakalik, N. M. Pace. July 1986.

This paper is the text of testimony presented before the subcommittee on Trade, Productivity, and Economic Growth of the Joint Economic Committee of the U.S. Congress on July 29, 1986. It summarizes preliminary results of RAND research undertaken to provide empirical evidence on the following issues: (1) the total expenditure for tort litigation in state and federal courts in 1985; (2) the proportion of costs that went to plaintiffs' and defendants' legal fees and other litigation expenses, the value of time spent by both litigants and insurance personnel, and the costs of operating the courts; (3) what proportion of the total was net compensation to plaintiffs; (4) the difference in litigation costs and compensation for torts involving motor vehicles and all other torts; and (5) the rate at which the tort system is growing. The study indicates that plaintiffs with tort lawsuits in state and federal courts of general jurisdiction received approximately half of the \$27 to \$34 billion spent in 1985. The costs of litigation consumed the other half. 10 pp.

P-7271-ICJ Summary of Research Results on Product Liability. D. Hensler. October 1986.

This paper is an edited transcript of written testimony delivered in October 1986 to the United States Senate Judiciary Committee. The author summarizes the results of empirical research conducted by the Institute for Civil Justice on four topics relevant to the discussion of the product liability system, including trends in litigation, expenditures for liability cases, the effects of product liability lawsuits on corporate behavior, and the special problems of mass toxic torts. 13 pp. Ref.

P-7272-ICJ Failing Faith: Adjudicatory Procedure in Decline. J. Resnik. February 1987.

This paper, reprinted from *The University of Chicago Law Review*, Vol. 53, No. 2, 1986, discusses the changes in federal litigation during the almost fifty years that the Federal Rules of Civil Procedure have been in effect. The paper considers why the drafters of the Rules did what they did, how the Rules in turn helped to create the environment that has given rise to the contemporary criticism of civil litigation, and how they might be revised. The author suggests that any revisions of the Rules ought to be undertaken with the intent of preserving their accomplishments, including ready access to the judicial apparatus. 67 pp.

P-7287-ICJ Trends in California Tort Liability Litigation. D. Hensler. March 1987.

This paper, testimony presented before the California State Legislature's Assembly Select Committee on Insurance, covers trends in liability litigation in California. Over the past decade personal injury lawsuits filed statewide have increased substantially. Automobile accident filing rates are roughly equal to population increase, but the rate of increase in other types of lawsuits has considerably outstripped population growth. A smaller fraction of personal injury lawsuits are fully contested, and the number of such cases tried to verdict has dropped in San Francisco, and probably elsewhere. Recent San Francisco verdicts are similar to those in other major jurisdictions. Increases in jury awards have been higher for product liability and medical malpractice cases—a significant proportion of the personal injury caseload—than for the slower-growing automobile accident cases. The vast majority of cases are settled, not tried. Although most practitioners assume that settlement amounts in personal injury cases are strongly influenced by jury verdicts, no comprehensive study examines how such trends are related to trends in settlement. The growth in jury verdicts has probably been reflected in trends in total compensation. 13 pp.

P-7411 Multiple Damages in Private Antitrust Suits. J. K. Cave. February 1988.

Stephen Salant's analysis of multiple damages for private antitrust suits ("Treble Damage Awards in Private Lawsuits for Price Fixing," *Journal of Political Economy*, December 1987) is generalized. The neutrality result that multiple damages do not affect production is shown to hold for a wide range of expected penalty and cost functions, provided indemnification is complete and consumers expect penalties

to be a multiple of quantity purchased. If consumers receive less than the cartel pays, neutrality is much less likely. 9 pp. Ref.

P-7418-ICJ Due Process: A Public Dimension. J. Resnik. March 1988.

This paper originally appeared in *The University of Florida Law Review*, Vol. 39, No. 2 (Spring 1987), and was presented at the "Conference on Procedural Due Process: Liberty and Justice," University of Florida, February 13-14, 1987. The author explores the public dimension of the due process theory: the role of the public in the adjudicative process, and the function of the adjudicative process for the public. The author considers the role the public plays as an audience, the modes of adjudication, the problems associated with public access, and the forms of public participation. 27 pp.

P-7419-ICJ Judging Consent. J. Resnik. 1986.

This paper was originally presented at a symposium on consent decrees, and appeared in the *University of Chicago Legal Forum*, Vol. 1987. It explores the growing interest in consent decrees, by which lawsuits are resolved with the issuance of a judgment or decree, entered with the agreement of the parties. Arguments have been made that consent decrees are more economical than adjudicated decrees and achieve greater rates of compliance, but the empirical bases for such claims have not yet been established. The author examines the standard arguments for consent decrees and considers the role of judges in reviewing and entering them. She discusses the fact that judges must rely on the involved parties to present sufficient information for judging the adequacy of an agreement. The author concludes that, in many cases (e.g., class actions), judges must determine the adequacy of either the representation of the decree or of the settlement itself. However, as judicial involvement in crafting settlements grows, the ability of judges to make disinterested determinations of the adequacy of settlements diminishes. 60 pp.

P-7441 The End of Employment-at-Will: Legal and Economic Costs. J. N. Dertouzos. May 1988.

In the past, employers have had almost complete discretion in firing employees. But as a result of recent judicial decisions, employment-at-will is eroding. This paper discusses the implications of, and the changes brought about by, these decisions; judicial theories; and how the specter of litigation can affect the workplace. It also discusses and extrapolates statistical evidence on wrongful termination trials and post-trial adjustments. Despite tremendous publicity given big jury awards, the annual cost of jury trials amounts to only about \$2.56 per worker, and the average legal cost associated with involuntary discharge of an at-will employee is only about \$200. Finally, the paper suggests proposals for judicial and workplace reform. 36 pp. Ref.

SOME OBSERVATIONS ON THE NEED FOR TORT REFORM

Gustave H. Shubert

January 1986

**THE
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PREFACE

This paper is an edited transcript of a speech made by Gustave H. Shubert, Director of The Institute for Civil Justice, to the National Conference of State Legislatures in Denver, Colorado, in January, 1986. An earlier version of the talk was presented to the Public Policy Institute in Albany, New York, November, 1985.

The work described in this paper is part of the research program of The Institute for Civil Justice. The paper draws on studies of civil court congestion and delay, alternative dispute resolution, the public costs of civil litigation, asbestos-related litigation, punitive damages, and medical malpractice. It explores the relevance of policy research to a subject of much current public debate: tort reform.

SOME OBSERVATIONS ON THE NEED FOR TORT REFORM

Gustave H. Shubert

BACKGROUND

I am here to talk about the need for reform in the civil justice system. There has been a lot of discussion this morning about legislative action, about the need for change in the insurance industry, and about the need for changes in business practices. My task is to set the background and describe the need for reform; I leave it to others to deal with potential courses of action.

In considering the problems of the civil justice system, problems with which all of us here today are concerned, I am reminded of my experience with the Air Force in Korea: One night, the lights went out and North Korean and Chinese troops started pouring over the fence of the base. I happened to be on the command net and heard the Base Commander, who had been rousted out from the Officers' Club, saying, "Colonel Jones, Colonel Jones, where are you? Where is that base defense plan I asked you to design last month?" That plan, of course, had never been prepared.

I think we are finding ourselves in a similar situation with regard to civil justice today. Plans aside, even the basic, fundamental information necessary to understand the need for reform has not yet been developed.

When we started The Institute for Civil Justice within The Rand Corporation in 1979 (I think most of you will agree that the problems we are talking about were with us in 1979 and before), there was virtually no systematic knowledge of the civil justice system or its operations. There was a feeling of general unease in certain sectors, particularly in the insurance industry, about the absence of information necessary to understand the operations of the system. On the one hand, there were the academics who were outlining rather elegant--but largely data-free--theories of legal behavior. At the other end of the spectrum, there was some information available on the operations of courtrooms--how many

jurors to impanel if one wanted to have three juries per week for so many weeks and so forth--but the entire area between these extremes was devoid of systematic research.

THE WORK OF THE INSTITUTE FOR CIVIL JUSTICE

Our job at Rand and at The Institute for Civil Justice is to try to fill that gap as much as we can to develop an understanding of the relationships between the various factors and the various players that comprise the civil justice system. The ICJ has focused on trying to understand the fairness of the system, the efficiency of the system, and its overall effectiveness. Translating that into researchers' terms:

- We are concerned with the outcomes the system has been producing: Are they consistent with the law? How do they vary as the law evolves? Have they been changing over time? What are some of their potential policy implications?
- We are concerned with the benefits and costs of the system: Who's paying what to whom--both in terms of compensation and in terms of transactions costs? What is the distribution of costs and benefits among various segments of our society?
- We are concerned with the overall effectiveness of the process by which outcomes are reached, costs incurred, and benefits distributed.

Then, knowing as much as we can and trying to accrue knowledge about these key issues as we go along, we disseminate information to those, like yourselves, who are concerned with the need for reform to help you decide what changes are needed and to perceive the ways in which they can be achieved.

I would like to convey to you this morning a few pieces of information about what we have learned in each of these areas--outcomes, costs, and timeliness--and to draw out some of the implications that I see for the important matters you are here to consider.

Research on Outcomes

First, let me deal with the question of outcomes. When we began our work, we found that there had been no data gathered in any systematic way pertaining to the outcomes the system is producing over time. We were confronted with anecdotal information, on the one hand, from people who would argue that the American jury was out of control, awarding more and more money to less and less deserving people all the time. Conversely, we encountered arguments that the American jury is the backbone of the civil justice system; that the jury is responsible and predictable; and, therefore, that the jury should be retained and enhanced as the fundamental basis of our civil justice system. These arguments had one common characteristic: Neither one had a shred of empirical evidence to support it.

So we began to examine what the American jury has been doing for the past 20 years. We found that, in terms of aggregate performance over time in Cook County and in San Francisco (the two areas that we chose for intensive study, developing the first longitudinal data bases regarding civil suits for money damages ever assembled in this country) the *median* jury award has remained essentially constant (in constant dollars) for 20 years. Considering only those cases in which the plaintiff prevailed, the fiftieth percentile award has been flat. In fact, in Cook County the median has actually decreased somewhat, hovering around the level of \$7,900 in 1979 dollars. That doesn't look like much to get excited about. However, when we looked at *average* awards, we found that toward the middle of the period the average award began to take off at an ever-increasing pace. This divergence between the average and median awards was accounted for almost exclusively by the top ten percent of cases. I will come back to the implication I draw from that in just a minute.

In these studies we found a number of other things. For example, in both Cook County and San Francisco, juries systematically inflate awards from between the time of filing and the time an award is made. So we have, in effect, juries awarding implicit prejudgment interest at the prevailing rate of inflation during the interval between filing and award.

Furthermore, we found that the circumstances of an injury affect the compensation awarded--something that I believe is not the intent of the law. The loss of two legs in an automobile accident, for example, is "worth" an average of \$250,000 in compensation. In contrast, the same loss to the same kind of plaintiff, but resulting from a workplace accident, brings an average compensation of \$750,000. Now we are not talking about punitive damages here: We are talking just about compensatory awards.

In another analysis, we examined the relationship between the nature of the litigants and the kinds of compensation that are awarded. We found in Cook County, for example, that blacks win less often, and, when they win, they obtain lower awards.

We also found a relationship (in both Cook and San Francisco Counties) between the apparent wealth of the defendant and the amount of compensation awarded by the jury for serious injuries. (Nothing in this field, it seems, is simple: We found no such "deep pocket" effect for relatively minor injuries.) Some of you probably know this intuitively or anecdotally. But to my knowledge, this is the first time that any attempt has been made to test the so-called "deep pocket" theory systematically and to see whether there is, in fact, any direct association between the size of awards and the characteristics of the plaintiff and defendant.

We are now examining carefully the phenomenon of punitive damages. We are assessing the characteristics of cases in which punitive damages occur and attempting to understand the implications of trends in punitives for the future. We are also attempting to estimate the effects of punitive damages on corporate decisionmaking, corporate behavior and the propensity to settle, as well as the amounts that are agreed upon.

The bottom line that I draw from our studies of the outcomes produced by the civil justice system is that one ought to focus on where the difficulty is. That difficulty seems to us to be primarily in the area of large, complex cases--the cases that are, in effect, new types of litigation for our system--cases involving product liability, professional malpractice of various kinds, suits against government, and

litigation in the area of business and contracts. The vast bulk of civil cases--the small suits (the fender-bender types, if you will)--seem to be proceeding relatively normally as far as verdicts are concerned. And recall that it is true that at the median, awards have remained (in constant dollars) relatively constant over time. It is in the area of the new types of litigation that the problems we have been talking about so far today are occurring, and it is in this area, I believe, they are likely to continue.

Research on Costs

What about costs? The first question we asked was: How do we, as citizens, value the services performed for us by the civil justice system--as expressed by our expenditures of tax dollars? What share of our public resources do we allocate toward supporting this system in the United States? This is, after all, the system dedicated to resolving all of our noncriminal disputes--disputes between individuals, between organizations, and between organizations and individuals.

The ICJ developed a method for assessing the costs of the civil justice system to the public--to you and me as taxpayers. We found that on an annual operating basis, we in the United States at the federal, state, and local levels are devoting about \$2.2 billion per year to operating that system. Now you might say, "That sounds like an awful lot of money to me," or you might say, "When I compare that amount of money with what we put into other public systems in this country, it doesn't look like much--in fact it looks rather small." The point I want to make is that at least we now know where our priorities are, expressed in dollar terms. We are finally in a position to ask and answer meaningfully questions about the significance of changes in public funding and whether increases in funding to improve the quality of that system would strain our overall resources.

With regard to private costs, we began by analyzing private costs of asbestos litigation. This is an important area in and of itself, but also because we believe it is a precursor of future massive toxic torts litigation. I think our results are reasonably well known by now. If you visualize a pipeline into which we put money at one end and see compensation coming out the other, that pipeline starts with a total

expenditure of about \$95,000--the full private-dollar input into the civil justice system for the average case. There is an immediate draw-down of \$35,000, about 37 percent of that initial amount, for defense costs--legal fees and related costs of corporations engaged in litigation. The remaining \$60,000 is paid to the plaintiff. The plaintiff, in turn, spends about \$25,000--about 40 percent--of what he recovers (26 percent of the total) on his legal fees and costs. The plaintiff himself, then, ends up with about \$35,000--37 percent of all the funds expended. So of all the monies spent, the injured parties net just a little more than a third of the total. These results raise two bottom-line questions in the cost area: Is it appropriate to spend nearly twice as much money determining how much should go to whom as is eventually provided in compensation to injured parties; and, would an increase in public resources, including some spent on thought about the problem, help reduce the extraordinary expenses that we are encountering in the private sector in the process of awarding compensation?

Research on Process

That brings me to the area of the overall effectiveness of the process. Here I will focus on the problems of congestion and delay and of the quest for alternatives that will lead to more efficient ways of resolving our disputes. Effectiveness, of course, must be measured in many dimensions, not just in terms of timeliness.

Court congestion and delay are problems that are widely known and discussed. When we began our work on them, we reached for the book entitled *Congestion and Delay: What We Are Doing About It*, and found that it had yet to be written. There was no data base in this country concerning the problem, either at the state or national level, that explained what the problem was, what its dimensions were, and what was being done about it. The ICJ, in effect, began putting that book together, and by providing our findings to officials of the judiciary in all the states and throughout the federal court system, we helped them to better understand their problems and all the different remedies that were being tried, or had been tried, or were being considered, to deal with congestion and delay.

We analyzed the history of congestion and delay in the Los Angeles Superior Court, the largest single trial court in the United States--one in which the mean time to trial is now about 48 months. Although attempts have been made again and again to deal with congestion and delay in the Los Angeles Superior Court, none of these efforts have had lasting effect. (I do not mean to point a finger at this particular court; jurisdictions across the country have attempted to reduce backlogs with little permanent effect on time-to-trial or on caseload.)

We believe the explanation lies in the changing composition of the caseload in the Los Angeles Superior Court--a change which my earlier remarks about the "new litigation" foreshadowed. Since World War II, the Los Angeles Superior Court has evolved from essentially a debt-collection mechanism to an institution primarily concerned with personal injury litigation: handling product liability and medical malpractice suits of increasing scientific and technological complexity; and grappling with the problem of asbestos litigation, of which Los Angeles is a major center. In short, the case mix has gone from one which required considerably less than one judge-day per trial to one which currently calls for more than three judge-days per trial, without consciously recognizing the causes and without adjusting its management mechanisms to accommodate them. The ICJ is now working with the Los Angeles Superior Court to see if together we can discover some answers to that problem--answers that will provide for handling routine cases in a prompt, efficient, and low-cost way; and, at the same time, permit targeting of complex litigation for special channeling and treatment to process those cases expeditiously, fairly, and at less cost to the parties and the public.

We have concluded that there are indeed better ways. If one understands the system, if one develops the facts about the system, it is possible to make it work better.

One further illustration: As we began the Institute in 1979, California initiated a mandatory judicial arbitration program in an effort to avoid the conventional and congested litigation track by shunting cases through an alternative dispute resolution mechanism. We evaluated the first year's experience with that program, and I think

there is a very important lesson that flows from that analysis. We found that in the large districts in California, a system designed as an alternative intended to save time and money was costing *more* and taking *longer*--yet no one was aware of these effects. We were able to identify the factors responsible for this counter-intuitive and perverse effect. Our work led to legislation which sought to correct these effects. Now the system is operating more efficiently and at less cost.

The bottom-line message I want to leave with you here is that there are dangers in whatever reforms you seek--dangers of unintended effects that may, indeed, be perverse. I emphasize the need to not only watch what you are doing, but also the equally important need to monitor the results and the impacts of what you have done.

THE NEED FOR REFORM

Is there a need for reform? What do I draw out of our work? It seems to me that:

- When you have radical changes in the types of litigation that you are attempting to handle;
- When the outcomes reflect the consequences of those changes;
- When you see that the *public* costs of settling even routine disputes through jury trials exceed the stakes (the average jury trial in this country costs taxpayers around \$8,000--not including the costs to the parties--and the median verdict in Cook County is around \$7,900. As Chief Justice Burger has been saying for the last couple of years, when you have a system where the process costs more than the stakes, you have a system that is not operating as efficiently as it might.);
- When you find that you have a mean time to trial of five years or more;
- When you find your alternatives are costing more and taking longer;

we must conclude that change may indeed be necessary.

Furthermore, we have a system that appears to prevent actions that everyone in this room would agree are socially desirable. Here I am talking about a system that withholds compensation where compensation is deserved, or provides compensation on an irrational, random, or unfair basis. I am talking about a system which, for example, delays (and even

prevents) through its rules--and some of the derivatives of those rules--the cleanup of toxic waste sites and causes all kinds of perverse behavior.

Let me give you two cross-cutting examples to conclude this discussion about what research has to say about the problem--something about asbestos in the courts and something about medical malpractice.

Example--Asbestos in the Courts

The ICJ has just published a document dealing with asbestos litigation, and I would like to sum up what I think that report says about our civil justice system. At the beginning of the period of asbestos litigation the system had strong, positive aspects. It provided incentives for lawyers to seek compensation for injured parties when the outcomes were very uncertain and the financial rewards of seeking that compensation were far from clear. The system demonstrated its flexibility, its capacity to absorb new knowledge, at least within some limits, and its ability to incorporate this knowledge into the legal process; and it demonstrated that it held at least the promise of deterring behavior which was known to be potentially hazardous and injurious. But as the asbestos litigation system entered its current phase--the "mega-plaintiff/mega-defendant" phase--we are processing thousands of cases, taking thousands or hundreds of thousands of man-years, with expenditures in the billions of dollars, and the weaknesses of the system, I think, have begun to overshadow its strengths.

We have a system in which plaintiffs, who may or may not be injured, have cases filed over which they have essentially no control. We have a system which idealizes individualized justice, but in fact delivers justice by the carload, where the individual is submerged in the batch processing of hundreds, sometimes even thousands, of cases. We have a system in which the incentives to lawyers provided by the rules and by the outgrowths of those rules are often conflicting and transcend the interests of the people they represent. We find that the rules themselves are frequently inappropriate, or at least, inconsistent. States like New York, with a two-year statute of limitations, make it virtually impossible to seek compensation for any long-term disease, such as those associated with asbestos--whereas other

states with much longer statutes do permit recovery. We find that the litigation is virtually endless: Since there are 20 defense firms per case on average, representing 20 defendants, the same issues are litigated 20 times in each case. These cases go on day after day, week after week, month after month on a repetitive basis.

The procedures used in these cases are tailored to trials, trials which almost never take place, as opposed to settlements which eventually do. Dispositions are slow, outcomes are inconsistent. Judges themselves are responding to their own incentive systems, which tell them to avoid handling these dirty, protracted, difficult, and acrimonious cases that are often appealed. No judge has a strong incentive to subject himself to the appeal process. The dispositions, as I mentioned, are not just slow, they are glacial. So to put some flesh on the bones for the need for reform, I think it is fair to say that in this area, outcomes are affected by considerations outside as well as inside the law. One is left with only one question about the need for reform: Will it work?

Example--Medical Malpractice

That brings me to the medical malpractice policy research conducted by The Institute for Civil Justice. Here we sought to determine whether the reforms introduced in response to the medical malpractice situation of the mid-1970s had any effect; and if they did, whether or not they were the intended effects. We can give a qualified "yes" to these questions. On the whole, in those states that took action through their legislatures to dampen medical malpractice activity in contrast to states which did not, suits were less likely to be filed; when they were filed, they were more likely to be dropped; if they were pursued, they were more likely to be settled rather than tried--and settled for a lesser amount.

As we went through the various measures that were legislated, however, we found substantial variation in the effects observed. For example, simply relaxing the collateral source rule, which many had thought would have a profound effect on this litigation, seemed to have no statistically significant effect at all. Here was a reform measure which, like California's initial approach to arbitration, did not have

its intended effects. Mandatory inclusion of payments from collateral sources, on the other hand, did have a significant effect. The lesson from all of this certainly is not, "Don't try for improvement." Rather, the lesson that I draw from this is: Try to estimate in advance as best you can the impact of legislation on costs, outcomes, and process, and build into every reform measure--or every measure for change--the capacity to evaluate the impact of that change; to provide, if you will, for some mid-course correction that will be available if these reforms are not having their intended effect.

CONCLUSION

People with more authority than I--people who are on the firing line--told you earlier this morning that we are in tough times. This is not just a consequence of an "insurance problem," although I believe the current insurance situation is, in part, a high-profile symptom of the maladies of our civil justice system. That symptom may turn out in the long run to be a benefit: (1) if it forces attention to the problem from those who are responsible for policy changes, be they chief executive officers, legislators, the bar, or the judiciary; (2) if it forces us to understand the system and how it operates; and (3) if it enables us to produce constructive changes toward fairer, more efficient, and more effective resolution of our civil disputes and forces us to make rational choices among the options we are confronted with today.

I think underlying all our problems with the civil justice system is the inability of this country to decide whether it wants to have a pure compensatory system or whether it wants to have a fault-based liability system. We can't decide whether everybody should be compensated for every injury no matter what its cause, or whether we want compensation to be limited in a strict way, in a comparative way, or in a contributory way to those who have caused the injury. My personal assessment is that we are experiencing the disadvantages of trying to operate both systems in tandem, the worst of both worlds. We are attempting to compensate everyone within a fault-based system and we are incurring huge social overhead costs by attempting to do so. I believe it is time to focus on that overall choice and to be rational in doing so.



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Costs and Compensation Paid in Tort Litigation

James S. Kakalik, Nicholas M. Pace

1986



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Foreword

How much does the current system of compensating people for injury cost? How much of the money spent ultimately reaches injured parties' pockets? These questions are central to the controversy concerning the tort system today, and answers to them are fundamental to changes in the system as well as to measuring the system's efficiency and effectiveness.

Until now, both critics and supporters of the tort system could only speculate about system-wide costs and compensation based on fragmentary and inconsistent evidence. Recognizing the importance of these issues early on, the ICJ has been assembling and analyzing comprehensive cost and compensation information since its inception. An early study (J. Kakalik and A. Robyn, *Costs of the Civil Justice System: Court Expenditures for Processing Tort Cases*, R-2888-ICJ, 1982) presented detailed estimates of court costs to process tort cases—public costs borne directly by the taxpayers. Subsequently, *Costs of Asbestos Litigation* (J. Kakalik et al., R-3042-ICJ, 1983) set forth the costs of asbestos litigation borne by private parties, confirming the dominance of private over public costs and establishing the dominance of transactions costs over compensation awarded for this type of litigation. In this report for the first time we have calculated the total annual bill for resolving tort lawsuits brought in courts of general jurisdiction.

This report presents the overall annual costs of the tort litigation system in 1985, the components of those costs, and the compensation awarded. It shows that about 37 percent of the costs of resolving such lawsuits was spent on the legal fees and expenses of both sides. Another 15 percent was attributable to the value of the time that plaintiffs and defendants spend on litigation and that insurers spent on processing underlying claims. A scant 2 percent was used to defray the costs of the courts. Thus when all these transaction costs were paid, plaintiffs retained about 46 percent of every dollar spent to compensate them for their injuries.

Although this report provides useful information about how much is spent on tort liability litigation, how this amount has changed in recent

years as the system has evolved, and how compensation-to-cost ratios differ for different types of tort lawsuits, it leaves many important questions unanswered. In particular, the report does not attempt to tell us whether the estimated \$30 billion spent annually on tort litigation is "too much" or "too little" in relation to the benefits delivered—an issue of values as well as efficiency. Nor does it address the issue of the tort liability system's effectiveness vis-à-vis other systems for compensating injury that exist or might be imagined. But by providing a clear answer to the questions "how much does it cost, how much does it compensate" the study lays essential groundwork for those who seek to answer questions of efficiency, value, and cost-effectiveness.

Gustave H. Shubert
Director
The Institute for Civil Justice

Executive Summary

COSTS AND COMPENSATION PAID IN TORT LITIGATION

Scope of this Study

Many people are concerned over the amount of society's resources being expended on civil liability litigation. But as with many long-standing issues, neither critics nor defenders of the tort system have had much solid evidence to support their views. Instead, anecdotes abound and misinformation is plentiful. The facts are hard to gather because most litigation costs and compensation payments are private expenditures, and are not reported publicly.

We undertook this study to provide empirical evidence on the following issues:

- What was the total expenditure nationwide for tort litigation¹ that was terminated in state and federal courts of general jurisdiction in 1985?
- How much of the total was spent for the various costs of the tort litigation system: plaintiffs' and defendants' legal fees and other litigation expenses, the value of litigants' time spent on their lawsuits, the value of time spent by insurance personnel, and the costs of operating the courts?
- How much of the total consisted of net compensation to plaintiffs?
- How do litigation costs and compensation paid differ for torts involving motor vehicles and all other torts?
- How fast is the tort system growing?

¹Cases involving civil wrong or injury, other than breach of contract, for which the court may provide damages, e.g., cases involving personal injury, death, or property damage.

We do not pass judgment on whether the costs of tort litigation and the compensation paid are too high or too low, nor do we make any policy recommendations for reforming the civil justice system. Indeed, we draw no conclusions on whether the system should undergo reform. Making such conclusions or recommendations would necessitate additional research on the costs of alternative reforms and on the benefits of the current court system and alternative systems.

This study focuses on lawsuits filed in federal district courts and in state trial courts of general jurisdiction—which account for about 92 percent of all compensation paid in tort litigation—because the most reliable data derive from those cases. The study excludes: (1) all expenditures for insured and self-insured claims that did not involve lawsuits, and (2) all expenditures for small claims and for tort litigation in courts of limited jurisdiction.

The study presents a range for the total bill for our current tort litigation system. We made two estimates. We used available published and unpublished information from the insurance industry, data from surveys of lawsuits and claims, and information on the number of lawsuits terminated in 1985. We made our first estimate from the top down, starting with the insurance industry's aggregate data on direct losses and expenses paid in 1985, adding self-insurance, and then deleting payments for claims that were not lawsuits. We made our second estimate from the bottom up, starting with data from surveys of individual tort lawsuits, appropriately projecting the numbers to 1985, and then multiplying by the number of tort lawsuits terminated in 1985 to make a national estimate.

OUR NATION'S BILL: TOTAL COSTS AND COMPENSATION PAID IN TORT LITIGATION

We estimate that the total expenditure nationwide for tort litigation terminated in state and federal courts of general jurisdiction in 1985 was between \$29 billion and \$36 billion. These expenditures for the approximately 866,000 tort lawsuits terminated annually in state and federal courts of general jurisdiction² include compensation paid to plaintiffs, legal fees and related expenses for both plaintiffs and defendants, insurance company claims-processing costs for claims in suit,

²Approximately 866,000 tort lawsuits were terminated in state and federal courts of general jurisdiction in 1985: 827,000 in state courts and 39,000 in federal courts. Tort litigation related to motor vehicles constituted just over half of the total case terminations. Tort cases filed in 1985 were slightly higher: 869,000 in state and 42,000 in federal courts.

the value of litigants' time spent, and the costs of operating the court system for these cases.

Since our \$29 billion and \$36 billion estimates are based on information of varying accuracy from several sources, neither can be taken as exact. However, although they were made using very different methods and using different sources for much of their data, they are similar enough to give us confidence that they are reasonably accurate.

We believe the true figure lies between our two estimates. The \$29 billion estimate, based primarily on insurance industry data, is probably somewhat low because it includes data from the major lines of insurance that pay for liability litigation (the auto liability, medical malpractice, general liability, and multiperil insurance lines) but excludes the relatively small liability expenditures buried in other lines of insurance (such as the marine and boiler and machinery lines). The \$36 billion estimate, based primarily on lawsuit survey data, is probably somewhat high because the survey response rate in the Civil Litigation Research Project was somewhat higher for lawsuits with higher amounts of litigation activity (and presumably higher costs).³ Lacking sufficient data to adjust our estimates to account for these factors, we therefore present a range of estimates.

TOTAL COSTS OF TORT LITIGATION

Of the \$29 to \$36 billion, an estimated \$16 to \$19 billion was spent for the various costs of the tort litigation system, not including the net compensation paid to plaintiffs:

The breakdown of the total costs for defendants, plaintiffs, and the courts is as follows:

Defendants' Costs of Litigation

Defendants' total costs were an estimated \$8 billion to \$10 billion: \$4.7 to \$5.7 billion for legal fees and related expenses, \$0.8 billion for insurance company costs of processing claims in suit, and about \$2.5 to \$3.5 billion representing the value of defendants' nonlawyer time and other expenses. (See Table S.1.)

³See David M. Trubek et al., *Civil Litigation Research Project Final Report: Vol. 1, Studying the Civil Litigation Process: The CLRP Experience*, University of Wisconsin Law School, Madison, March 1983, p. I-120. Court records showed that the median case in the sample had 11 legal "events," while there were 13 legal events for the median case with a completed lawyer interview.

Table S.1

**DEFENDANTS' COSTS OF TORT LITIGATION TERMINATED
IN STATE AND FEDERAL COURTS OF GENERAL
JURISDICTION IN 1985**
(In \$ billion)

Type of Cost	Estimate 1, Primarily Based on Insurance Industry Data	Estimate 2, Primarily Based on Lawsuit Survey Data
Defendants' legal fees and expenses	4.7	5.7
Claims-processing cost for lawsuits	0.8	0.8
Value of defendants' time and other expenses	2.5	3.5
Total	8.0	10.0

The average⁴ tort lawsuit closed in 1985 resulted in an estimated \$5,400 to \$6,600 in defendants' legal fees and related expenses.

Plaintiffs' Costs of Litigation

Out of the total compensation that plaintiffs received, they paid \$6 billion to \$8 billion in legal fees and expenses, and the value of plaintiffs' time spent on the litigation was about \$1 billion. (See Table S.2.)

The average tort lawsuit concluded in 1985 resulted in an estimated \$7,300 to \$8,800 in plaintiffs' legal fees and expenses, which was approximately 30 to 31 percent of total compensation paid to plaintiffs.

Court Expenditures

Court expenditures are defined as those by any level of government (federal, state, or local) for processing tort cases in the court system. The total court expenditure nationwide, net of court fees paid by tort litigants, was an estimated \$0.5 billion.

⁴Throughout this report, the term "average" is defined as the arithmetic mean, and zero values always are included in the calculation. The average should not be interpreted as the typical value or as the median, which is the value below and above which there are an equal number of data values.

Table S.2

**PLAINTIFFS' COSTS OF TORT LITIGATION TERMINATED
IN STATE AND FEDERAL COURTS OF GENERAL
JURISDICTION IN 1985**
(In \$ billion)

Type of Cost	Estimate 1, Primarily Based on Insurance Industry Data	Estimate 2, Primarily Based on Lawsuit Survey Data
Plaintiffs' legal fees and expenses	6.3	7.6
Value of plaintiffs' time and other expenses	0.7	1.1
Total	7.0	8.7

**COMPENSATION PAID IN COMPARISON WITH TOTAL
COSTS OF TORT LITIGATION**

Of the \$29 to \$36 billion total national expenditure in 1985, plaintiffs received \$21 to \$25 billion in total compensation, or about \$14 to \$16 billion in net compensation, after deducting all their litigation costs. (See Table S.3.)

The average total compensation paid per lawsuit concluded in 1985 in a court of general jurisdiction was in the range of \$24,000 to \$29,000. This average includes all tried, settled, and dismissed lawsuits.

Table S.3

**COMPENSATION PAID IN COMPARISON WITH TOTAL COSTS OF
TORT LITIGATION TERMINATED IN STATE AND FEDERAL
COURTS OF GENERAL JURISDICTION IN 1985**
(In \$ billion)

Type of Expenditure	Plaintiffs	Defendants	Courts	Total
Total compensation	20.7-25.1	20.7-25.1	NA	NA
Total costs of litigation	7.0-8.7	8.0-10.0	0.5	15.5-19.2
Net compensation	13.7-16.4	NA	NA	13.7-16.4
Total expenditure	NA	28.7-35.1	0.5	29.2-35.6

NOTES: The first number in the range is the RAND estimate primarily based on insurance industry data, and the second number is the RAND estimate primarily based on lawsuit survey data.

NA = not applicable.

To deliver this \$14 to \$16 billion in net compensation, the tort litigation system expended \$16 to \$19 billion in transaction costs. These costs included \$11 to \$13 billion in combined defendants' and plaintiffs' legal fees and expenses, \$0.5 billion in court expenditures, and an additional \$4 to \$5 billion in the value of the time spent by litigants and their employees.

In sum, of all the money paid in compensation and legal fees and related expenses of tort litigation, the injured plaintiff receives approximately 56 percent in net compensation. The litigation system consumes the rest. If we add the value of the time spent by the litigants to the costs, the injured parties' net compensation sinks to 46 percent of the total expenditures.⁵ All the components of expenditures are shown graphically in Fig. S.1.

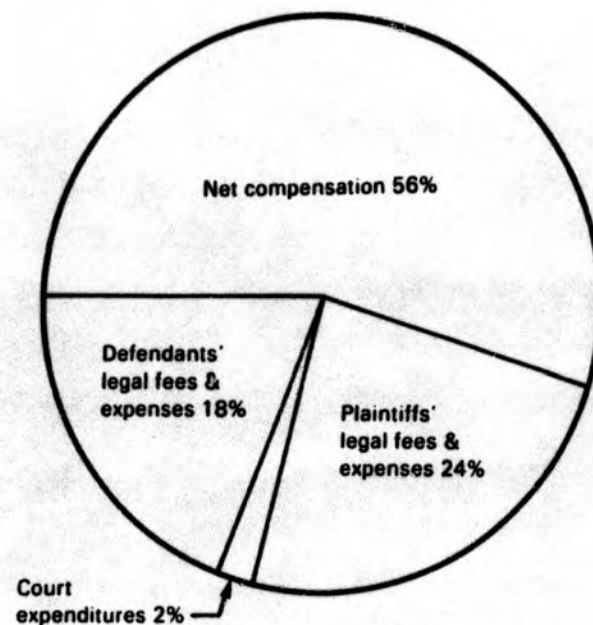
COMPARISON OF AUTO TORT AND OTHER TORT LITIGATION EXPENDITURES

How do litigation costs and compensation differ between torts involving motor vehicles and all other torts? Auto torts accounted for about half of all tort filings in courts of general jurisdiction in 1985, and also about half of the total compensation paid. (See Table S.4.)

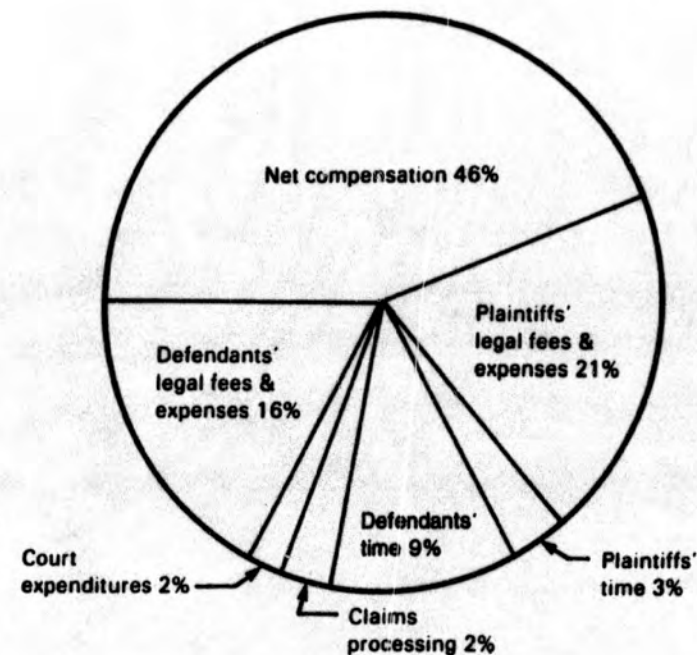
The legal fees and expenses paid by plaintiffs as a percent of total compensation were essentially the same for auto tort (31 percent) and other tort cases (30 percent). However, defendants' costs of litigation differ significantly. For auto tort cases, which are usually relatively straightforward, defense legal fees and expenses were an estimated 16 percent of total compensation. For other (nonauto) tort cases, which are often more complex, defense legal fees and expenses were much higher—28 percent of total compensation paid.

The plaintiffs' net compensation as a percentage of the total expenditures was 52 percent for auto torts and 43 percent for all other torts. This difference primarily reflects the relatively higher defendants' litigation costs for nonauto torts. All the components of auto and other tort litigation expenditures are shown graphically in Fig. S.2.

⁵Our two estimation techniques yielded similar results. The most important number, the plaintiffs' net compensation as a percentage of the total expenditures, was 47 percent using one method and 46 percent using the other.



Percentages of total expenditures
excluding value of litigants'
time and claims processing



Percentages of total expenditures
including value of litigants'
time and claims processing

NOTE: Totals may not sum to 100 due to rounding.

Fig. S.1—Costs and compensation paid for the average tort lawsuit
terminated in 1985 (average gross compensation
paid = \$24,000 to \$29,000)

Table S.4

**AUTO AND OTHER TORTS: COSTS OF LITIGATION AND
COMPENSATION PAID IN STATE AND FEDERAL
COURTS OF GENERAL JURISDICTION IN 1985**
(In \$ billion)

Type of Expenditure	All Torts	Auto Torts	Other Torts
Costs to plaintiffs	7.8	3.3	4.5
Costs to defendants	9.0	2.8	6.2
Court expenditures	0.5	0.2	0.3
Total costs of litigation	17.3	6.3	11.0
Net compensation paid	15.1	6.9	8.2
Total expenditures	32.4	13.2	19.2

NOTE: Dollars shown are the average of Estimates 1 and 2.

GROWTH OF THE TORT SYSTEM

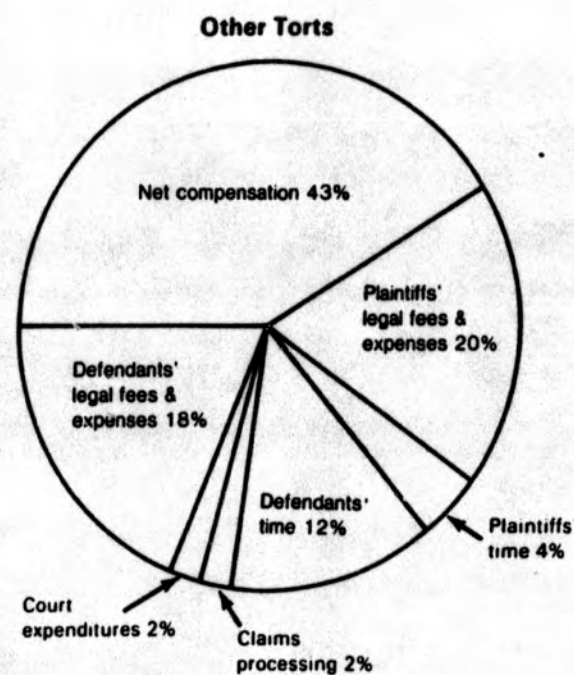
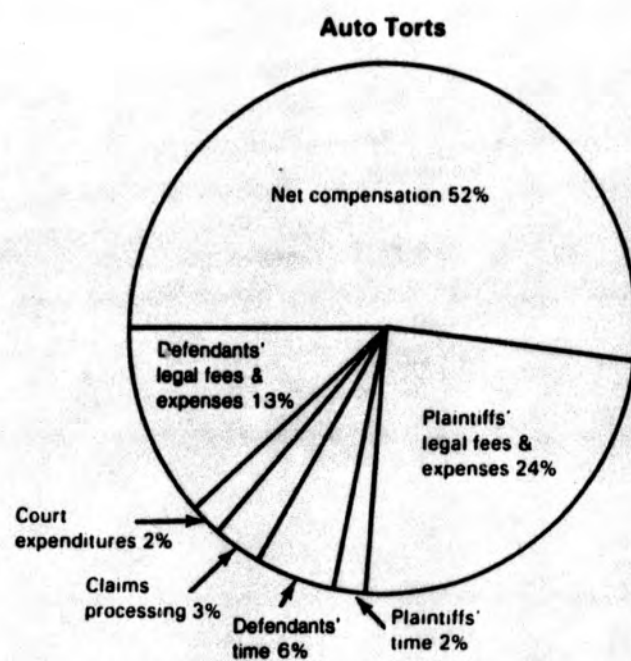
Although the main focus of our study has been analysis of litigation costs and compensation paid on cases terminated in 1985, in the course of our research we also compiled some data on the rate of growth in the tort system.

That growth rate depends on what part of the system you are considering. In terms of tort lawsuits filed, we estimate that the annual growth rate has averaged 3.9 percent since 1981—about 3.0 percent per capita.

The growth rate in the expenditures for the tort system has been higher. Although we do not have precise data on that rate for tort lawsuits, we can get a reasonable idea of that rate by looking at the growth rate in amounts paid per claim by insurers over the last five years. The following figures include both claims involving lawsuits and claims for which no lawsuit had been filed.⁶

The average annual growth rate in average compensation paid per liability claim over the past five years has been about 12 percent for auto claims and 14 percent for other tort claims—considerably higher than the 7 percent average growth in the Consumer Price Index during the same years. The average growth rate in insured defendants' average legal fees and expenses paid per liability claim over the past five years has been about 6 percent for auto and 15 percent for other tort claims. Thus, other nonauto tort expenditures per claim are growing faster than auto tort expenditures per claim.

⁶Of all insured liability compensation paid in 1985, we estimated 50 percent was paid for claims involving lawsuits.



NOTE: Percentages are based on the average of two estimates, and may not sum to 100 due to rounding.

Fig. S.2—Costs and compensation paid for the average auto and other tort lawsuit terminated in 1985

Because compensation payments and litigation expenditures are growing, the expenditures on cases filed in 1985 will be higher than they were on cases terminated in 1985.

SUMMARY

Plaintiffs with tort lawsuits terminated in 1985 in state and federal courts of general jurisdiction received approximately half of the \$29 to \$36 billion spent. The costs of litigation consumed the other half.

CONTINGENT FEES FOR PERSONAL INJURY LITIGATION

**PREPARED FOR THE HEALTH CARE FINANCING ADMINISTRATION,
U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE**

PATRICIA MUNCH DANZON

**R-2458-HCFA
JUNE 1980**

Rand
SANTA MONICA, CA. 90406

PREFACE

The research reported here was funded by the Health Care Financing Administration, U.S. Department of Health, Education, and Welfare, under Contract No. 600-76-0150, "An Economic Analysis of Medical Malpractice." Other Rand work performed under this contract includes a study of the disposition of malpractice claims (R-2622-HCFA), an analysis of the determinants of the frequency of malpractice claims (R-2661-HCFA/ICJ), and an examination of the level of malpractice insurance premiums (R-2623-HCFA).

Contingent fees are the typical form of payment for plaintiff attorneys on personal injury cases. Several states have imposed restrictions on contingent fees as one among several measures enacted in response to the growing cost of malpractice claims. This report presents a theoretical analysis of contingent and hourly wage contracts. The analysis is used to show the effect of these different forms of contract on the amount of litigation and to identify the probable effects of restrictions on contingent fees.

SUMMARY

Contingent fees are the typical mode of payment for plaintiff attorneys in personal injury litigation. Under a contingent contract, the attorney's fee is contingent on the outcome of the case: If the plaintiff wins, the attorney is paid some predetermined fraction of the award; if the plaintiff loses, the attorney receives no fee. Under an hourly wage contract, the plaintiff pays the attorney an hourly rate for his time, regardless of the outcome of the case. Thus, the contingent fee shifts the risk of zero return on the investment in litigation from the plaintiff to the attorney.

There is a long tradition of hostility toward contingent fees. A number of states have recently restricted their use in medical malpractice cases, in response to the rise in frequency and severity of malpractice claims. Opponents of contingent fees claim that giving lawyers the right to finance litigation makes them stir up cases, hoping for excessive financial reward. They also claim that the lawyer's financial stake creates a conflict of interest between lawyer and plaintiff. Proponents argue that by shifting the risk to the lawyer, contingent fees give legal recourse to plaintiffs who have legitimate claims but are unwilling to risk investing in an hourly wage contract. Further, they contend that by making the fee depend on the amount of recovery, contingent contracts align the interests of attorney and client. This alignment is particularly important when the client lacks the expertise to assess the lawyer's performance.

There is no conclusive theoretical analysis and little empirical evidence to support claims on either side of the debate. Yet, to the extent that fee arrangements affect the number of outcomes of suits filed, they affect the efficiency of the tort system in the performance of its dual functions of deterring negligent behavior and compensating people injured through negligence.

The purposes of this study are to clarify the debate over contingent fees and to determine the probable effects of restrictions on contingent fees on the frequency and severity of claims. The study analyzes the incentives created by the alternative assignment of risk

under the hourly and contingent contracts. The analysis assumes that attitudes toward risk affect the willingness of plaintiffs and attorneys to engage in litigation with uncertain payoff. Plaintiffs and attorneys may be averse to risk, or may prefer risk, or may be neutral to risk. A risk-averse person is one who would not participate in a lottery if the odds of winning were only even. A risk-preferring person would be willing to participate in a 50-50 lottery. A risk-neutral person is indifferent to the 50-50 lottery. In the medical malpractice context, a risk-averse plaintiff would not bring suit if the expected cost of litigation were as great as the expected award (i.e., the possibility of winning times the amount of the award).

The contractual assignment of risk and the parties' risk preference affect the number of cases that will be filed, the attorney's effort per case, and hence the probability of winning and size of award. If plaintiffs and attorneys are risk-neutral, the frequency of claims, the average gross recovery, and the plaintiff's probability of winning will be unaffected by the type of contract: The amount of litigation will be that necessary to maximize the net recovery of plaintiffs. The division of gross recovery into the net to the plaintiff and fee to the attorney is also unaffected, on average, over all plaintiffs. However, on cases won the actual fee is higher, hence net recovery is lower with a contingent fee than with an hourly wage contract. Obviously, on cases lost, the fee and therefore the plaintiff's out-of-pocket loss are zero.

Under the more plausible assumption that plaintiffs are typically risk-averse and lawyers risk-neutral, the frequency of claims, average gross recovery, and plaintiff's probability of winning will be lower with an hourly wage than with a contingent fee. This is because with an hourly rate, the plaintiff finances the litigation and bears the risk of zero return. With an hourly contract, the risk-averse plaintiff will spend less than is necessary to maximize the net value of his claim.

The analysis disputes the allegation that contingent fees result in excessive (above competitive) rewards for attorneys. Rational allocation of time by an attorney between contingent fee and hourly rate cases and market competition both act to control fees. True, the actual fee on cases won will exceed the value of time spent on those cases. However, the excess is compensation for the ex ante risk of receiving no

fee. What little empirical evidence is available confirms that, averaging over cases won and lost, the effective hourly earnings of attorneys paid on a contingent basis are similar to the hourly earnings of defense attorneys paid by the hour. This is consistent with competition and elimination of risk aversion from the contingent fee sector. Competition will tend to drive attorneys who are risk-averse out of the contingent fee sector. The risk-averse attorney would require an expected fee that exceeds the value of his time, whereas a risk-preferring attorney would accept a fee that is less than the value of his time. Thus, risk aversion on the part of the attorney tends to reduce the net recovery of the client, and risk preference tends to increase it.

Evidence on the ratio of legal costs to average award suggests that returns to attorney effort diminish more rapidly for the defense than for the plaintiff in severe injury cases. One implication of this asymmetry in the "judicial production function" is that a reduction in attorney wage rates will tend to induce a greater increase in the efforts of plaintiffs' attorneys and, hence, lead to an increase in the size of awards and plaintiff win rates. This factor may have contributed to the increase in frequency and severity of claims and pro-plaintiff shift in the law in recent years.

Constraints on the minimum time necessary to process a case may bar cases with low expected recovery from suit. This effect is independent of the type of fee contract: If small cases are barred from the judicial process, it is because of the high fixed costs, not the contingent fee system. Ceilings on the contingent fee percentage may significantly reduce the number of hours an attorney will spend on a case and effectively bar certain cases from trial. The types of cases likely to be affected are (1) cases of severe injury but uncertain evidence of negligence, (2) cases with low expected payoff (minor injuries), and (3) cases where the plaintiff is highly risk-averse. All these factors contribute to a relatively large fee percentage, in the absence of constraints.

Restriction on contingent fees would also tend to be regressive, deterring low- and middle-income plaintiffs from filing even meritorious

suits. Risk aversion, low wealth, and high borrowing costs all create obstacles to filing that a contingent fee reduces but may not totally eliminate. For example, a person with average risk aversion but assets of less than \$20,000 would be unwilling to hire an attorney on an hourly basis to handle a malpractice suit yielding the average award of \$29,456 (1977 data), even with a high probability of winning. Thus, in the absence of the contingent fee, the number of cases filed would certainly be less. Conversely, the common allegation that the contingent fee induces attorneys to bring claims with little legal merit has no basis in logic. The fact that the fee depends on winning provides an incentive to screen out cases with little legal merit--an incentive that is lacking with an hourly fee.

If ceilings or outright prohibition of contingent fees are intended to reduce the amount paid out through the malpractice liability system, they will probably be successful. However, if the socially optimal level of litigation is that which would be undertaken by a fully informed, risk-neutral plaintiff, the unconstrained contingent fee is likely to yield the closest approximation to this ideal. Without contingent fees, plaintiff risk aversion will produce a suboptimal investment in litigation and hence suboptimal deterrence and compensation. Even if the explicit policy objective were to reduce frequency of suits, size of awards, and expenditure on litigation, it is doubtful that limiting contingent fees is an efficient means of achieving these results.

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THE IMPACT OF FEE ARRANGEMENT ON LAWYER EFFORT

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AUSTIN SARAT
DAVID M. TRUBEK

This paper focuses on the impact of fee arrangement on the amount of time lawyers are likely to devote to civil cases ("effort"). Drawing upon data collected by the Civil Litigation Research Project, we compare the behavior of lawyers working on an hourly fee basis with the behavior of contingent fee lawyers. Like previous work on this issue, the paper finds that fee arrangement does influence the amount of effort lawyers devote to a given case. However, contrary to previous work, the analysis indicates that the effect is not a simple effect on hours worked but a more complex effect on a number of aspects of lawyers' behavior. Together these produce an effect on hours that varies by size of case. For modest cases (with stakes of \$5,000 or less), contingent fee lawyers spend less time on a case than hourly fee lawyers. Yet we find no statistically significant evidence of a differential in effort for larger cases but rather an indication that, if there is an effect, it may be in the opposite direction.

In recent years there has been considerable discussion of the impact that various fee arrangements have on the nature of the services lawyers provide for their clients. In particular, a number of scholars have drawn on economic theory to model the effect of fee arrangements on lawyer behavior. Several of these theoretical studies reach the conclusion that lawyers paid on a contingent fee basis will spend fewer hours on a case than would be optimal for the client. They also suggest that lawyers paid on an hourly basis will put in more than the optimal number of hours. These analyses are used, in some cases, to draw policy conclusions about the contingent fee contract.

* This is a revision of a paper presented at the Midwest Political Science Association annual meeting, Palmer House Hotel, Chicago, Illinois, April 12-14, 1984. The analysis is drawn from the work of the Civil Litigation Research Project, which was sponsored by United States Justice Department Contract JAOIA-79-0040; additional support was provided by the Research Committee of the University of Wisconsin-Madison Graduate School and by the University of Wisconsin Law School. We acknowledge editorial and other assistance from two anonymous reviewers and Felicity Skidmore.

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Except for Rosenthal's (1974) study of sixty cases, which does lend some support to the theoretical analyses, there have been no systematic empirical tests of these propositions. This paper presents an analysis of the effects of fee arrangement on lawyer behavior based on data drawn from interviews with 371 hourly fee lawyers and 267 contingent fee lawyers who worked on cases selected randomly from twelve state and federal courts.

I. THEORETICAL BACKGROUND

Lawyers are the primary mechanism connecting the citizenry to the legal order. Traditionally, they are pictured as neutral professionals who work only to advance the interests of their clients. This image has been called into question, however, by recent theoretical inquiries that focus on the economic incentives and personal goals lawyers bring to their work. Particular attention has been given to the effect of fee arrangement on the work that lawyers do for specific clients. Typically, the concern has focused on the implications of hourly versus contingent fee arrangements (see Franklin *et al.*, 1961; MacKinnon, 1964; Schwartz and Mitchell, 1970; Rosenthal, 1974; Clermont and Currihan, 1978; Danzon, 1981; See, 1984), though Johnson's (1980-81) recent discussion of the impact of fee arrangement extends the analysis to various forms of third-party payment.

The argument about fee effects typically uses a hypothetical benchmark to appraise the performance of lawyers under different fee arrangements. Johnson (1980-81: 570), for example, uses the concept of an "alter ego" lawyer—one who is motivated entirely by the client's best interest and will, therefore, provide the amount of effort a fully informed client would authorize the lawyer to make. In Johnson's words, the lawyer "will invest additional resources . . . in a given case [assuming complete information] until *maximum net benefits* are achieved for the client."

These theories suggest that hourly fee lawyers will tend to deviate from the alter ego standard by investing greater resources than is in the best interests of the client, whereas contingent fee lawyers will tend to deviate in the other direction, investing fewer resources than the client might want. The usual explanation for this postulated behavior derives from the economic incentives that lawyers who handle litigation are assumed to face. For example, an hourly fee lawyer who has surplus time is expected to spend more time on a case than the

case warrants (as measured by the alter ego benchmark) because she can charge the client for time that would otherwise produce no income. In contrast, the contingent fee lawyer with more work than time available is expected to underinvest in some cases in order to work more on other cases that promise greater financial rewards. Rosenthal's (1974) study of sixty personal injury cases in New York, the only published empirical evidence about the potential conflict of interest created by different kinds of fee arrangement, appears to support the view that contingent fee lawyers "underinvest."¹

There are some fundamental problems with this over/under investment hypothesis. The first is that the analysis assumes too simple a model of how lawyer behavior and fee arrangement may interact. Lawyers are seen as agents who are exclusively motivated by economic self-interest and whose efforts in a given case (measured by the hours they spend) are *directly* and solely affected by the economic incentives presented by the fee arrangement under which they work. These assumptions are questionable.

While all (or most) lawyers are sensitive to economic concerns, and some no doubt fit the image of self-interested income maximizers at the heart of the over/under investment hypothesis, such a picture is a gross oversimplification. Certainly, lawyers may and frequently do temper economic interest with other competing values, including professional standards and a sense of responsibility to the client (cf. Kritzer, 1984). Thus, hourly fee lawyers may be well aware of the costs to the client of their services and incorporate the client's financial concerns into their time-allocation plans, even if formally they are free to bill as many hours as the case demands. On the other hand, contingent fee lawyers are not necessarily going to take short cuts and omit important activities just because, on the narrowest cost-benefit calculus, they themselves may not gain as much from the marginal effort in this case as in another they are handling. Even if they were tempted to do so, the necessity to secure client consent to follow certain courses of action would limit such inclinations.²

¹ This situation arises because there is a tendency for the return per hour of lawyer time to decrease rapidly after a certain threshold is reached. For example, a lawyer might be able to get a \$6,000 settlement after 20 hours of work; going to trial might double the recovery but might easily require another 40 hours of work. In this example, assuming a one-third contingent fee, the settlement would yield an hourly rate of \$100 while going to trial would produce an hourly rate of \$67.

² A client's ability (or inability) to pay a substantial fee may check the amount of effort the lawyer devotes to the case. Furthermore, hourly fee

Furthermore, when economic incentives do have an impact on lawyer effort, the effect may be less direct than the literature implies; fee arrangement may affect other factors, which themselves directly influence effort. If such is the case, it is impossible to understand fully the significance—or lack thereof—of a fee arrangement unless one takes into account the mediating effect of the other factors. Thus, it has been suggested that clients' attitudes toward the amount of time lawyers spend on cases should differ with the fee arrangement they employ. Where the lawyer is hired on a contingent fee, the client, it is said, should exercise control to be sure that *enough* time is spent on a case (Rosenthal, 1974). Where an hourly fee is used, however, clients are advised to make certain that lawyers do not put in *too much* time (Wessel, 1976). Were clients actually to follow such advice, fee arrangements would play a role in determining lawyer effort, but only through their influence on the nature and degree of the control exercised by clients.

The second problem with the over/under investment hypothesis is with the idea of using the "alter ego" lawyer's effort as the benchmark against which to measure contingent fee versus hourly fee hours. The additional resources that Johnson's alter ego lawyer decides to invest are measured by the marginal "costs to the litigants"—with more resources invested as long as their expected return is greater than those costs (Johnson, 1980-81: 570). This is, in principle, a relatively straightforward proposition with respect to the hourly fee lawyer. But for the client who has retained a lawyer on a contingent fee basis it is less satisfactory because there are no marginal costs to the litigant. Johnson's conclusion that the client's gains in such a circumstance are greatest when the recovery is greatest simply reflects the fact that lawyer hours are not a cost to such a client.³

Thus, we do not believe that the concept of the alter ego lawyer is helpful in analyzing the relative amounts of effort hourly fee and contingent fee lawyers devote to cases. An alternative approach to looking at the question of the impact of

lawyers may have other clients they charge at a higher rate (or who are repeat clients), and they will not overinvest on client A's case because they would prefer to spend more time on client B's.

³ This analysis represents something of a simplification because the client typically must pay expenses in addition to the contingent fee, and each marginal increase in time may involve some marginal increase in expenses. However, we have shown elsewhere (Kritzer *et al.*, 1984) that in most cases expenses represent less than 10% of the overall lawyer's bill.

fee arrangement on lawyer effort is to start with the simple hypothesis that if the argument about over and under investment is correct, we would expect a contingent fee lawyer to expend less effort than an hourly fee lawyer, *all other influences on effort being held constant*. If such an effort gap could be found, it would lend support to concerns about too much or too little effort, though one would not be able to state definitively whether the contingent fee lawyer was underinvesting, the hourly fee lawyer was overinvesting, or some combination of the two was occurring.⁴ Nonetheless, we would be much further along in our efforts to understand how fee arrangement affects lawyer effort. This is the analysis that we present below.

The next two sections describe the data and methodology we have used, followed by the results of our analysis of the relationship between fee arrangement and lawyer effort.

II. DATA

The data used in our analysis are drawn from court records and from hour-long interviews with the lawyers involved in the cases represented in the court records. Since we are interested in lawyer behavior, the lawyer rather than the case is the unit of analysis, and each case may be included more than once if interviews were conducted with more than one lawyer in that case.⁵ The interviews were conducted about two years after the close of the case discussed. Even though the attorneys were

⁴ We should point out that the "services" provided by the contingent fee lawyer may differ in important ways from those of the hourly fee lawyer. First, the contingent fee lawyer is providing a "risk-bearing" service. That is, a part of the contingent fee can be seen as payment for assuming the risk that there will be no (or very low) recovery in the case; alternatively, one might argue that the risk is a part of the overhead that the lawyer must bear, and hence the effective hourly rate must include that element of overhead. Second, the contingent fee lawyer virtually never receives any compensation until the case is completed and thus can be said to provide a financing service; while it is not uncommon for hourly fee lawyers to defer billing until a case is concluded (we have no specific information on the frequency of this practice), it is likely that on the average, the financing aspect of the hourly fee lawyer's charge is significantly lower than for the contingent fee lawyer.

⁵ There are a relatively small number of cases where more than one respondent is included for the same side of a case. Replicating the analyses "within" each side while randomly excluding the "extra" cases produced no change in our findings (see Trubek *et al.*, 1983b: II-103). When we contrast the two fee types, there is more of a problem since there are many cases with both a contingent fee plaintiff's lawyer and an hourly fee defendant's lawyer. However, we believe this is a nonproblem because the thrust of our findings is that the regression models for the two fee arrangements are different, and the inclusion of respondents from the same case should tend to pull the two equations together; thus we have, if anything, understated the differences in the regression coefficients.

asked to review their case files, the interview information may have been influenced to some degree by the recall process. The cases are drawn from twelve courts in five federal judicial districts: Eastern Wisconsin, Eastern Pennsylvania, Central California, New Mexico, and South Carolina. This analysis sample includes interviews with 371 hourly fee lawyers⁶ and 267 contingent fee lawyers from cases randomly selected from the twelve state and federal courts.⁷ Detailed information on the data collection can be found in Kritzer (1980-81), Kritzer *et al.* (1981), or Trubek *et al.* (1983b).

In order to analyze the data we had collected, we needed to deal with a number of "missing data" problems. First, we had to drop a substantial number of respondents (and thus cases) from the analysis. Naturally, we could not include cases where we lacked information on the number of hours the lawyer spent on the case (79 respondents). We also decided to drop cases where the respondents could, or did, not supply us with a money value for the amount at stake (our "stakes" variable—388 respondents).⁸ The result of our decision to drop cases with "missing" stakes data is that the regression subsample used below differs from our overall lawyer sample.

A comparison of the included and excluded cases showed that on many parameters the regression subset is not significantly different from the overall sample. However, there are some differences worth noting: the set of cases that have monetary stakes information and are thus included in the regression sample (1) are weighted more heavily toward tort and contract cases and include fewer divorce, regulation, and public law cases; (2) contain more state cases; and (3) include a higher percentage of lawyers who represent plaintiffs and work on a contingent fee basis. Our conclusions are drawn only from this subset of cases and should be interpreted accordingly.⁹

⁶ A small number of lawyers in our sample (about 1%) were paid on some combination of percentage and time; they were treated as hourly fee lawyers for purposes of the analysis below (see Clermont and Currihan, 1978).

⁷ Data were originally collected on 1649 cases; from these cases, we obtained hour-long, detailed interviews with 1382 lawyers (plus 430 very brief interviews covering additional cases in the sample; see Kritzer, 1980-81: 520, for more detail on why this was done).

⁸ We felt that stakes were sufficiently important in explaining hours that an analysis which omitted this variable would be of little value (and we were unable to find a way to fill in missing data on stakes). As we discuss below, we needed the stakes variable to adjust for a methodological problem inherent in data on litigation.

⁹ We did not have data on all the other variables for all the cases that remain in the regression subset. Since we could not eliminate all cases with missing data and retain an adequate sample, we estimated these missing items using means or medians. We omitted 26 respondents for whom we had

Although our analysis follows previous work in focusing on two types of fee arrangement—hourly fee and contingent fee lawyers—there are at least three “pure” types of fee arrangements for litigation-related work: the hourly fee, the contingent fee, and the flat, or fixed, fee, which is set in advance of the work.¹⁰ By and large individuals, who are usually plaintiffs,¹¹ hire lawyers on a contingent fee basis (with the major exception of divorce cases); organizations usually hire lawyers on a straight hourly basis. Only a small proportion of cases—typically small, simple ones involving individuals or small organizations—involve flat fee arrangements. Reflecting their relative scarcity in practice, the incidence of flat fee cases in our sample was too small for separate analysis.

III. METHODOLOGY

The methodology used in our analysis first tests the assumption that if the type of fee arrangement had no effect on the amount of lawyer effort, we should find that, controlling for the other factors that influence lawyer effort, hourly fee and contingent fee lawyers spend the same amount of time on a case. The basis of that test, and of the rest of our analysis, is a general model of the time allocation process. The model on which the analysis is based includes five clusters of variables: (I) the process of interaction among the parties, (II) case characteristics, (III) participant characteristics, (IV) participant goals, and (V) processing and case management characteristics. These clusters include a total of 30 variables. The individual variables are described in capsule form in Table 1; more detail may be found in the Appendix.

missing data items we did not feel that we could “fill in.” To avoid artificially depressing the variance in our data, we added a normally distributed random number to each of the means or medians that replaced missing data. Missing data were filled in this way for 1% or fewer of our cases except for the lawyer specialization variable, where 4% of the respondents had missing data.

¹⁰ A fourth arrangement, which few lawyers admit to using, might be described as “what the case is worth” (i.e., a subjective judgment regarding what the client is willing to pay). In addition to the “pure” types of fee arrangements, there are many combinations (e.g., hourly fee adjusted for results, which combines the hourly and the contingent arrangements). These may or may not be made explicit to the client.

¹¹ An early study of litigation suggested that individuals were usually defendants (Wanner, 1974; 1975). A more recent analysis indicates that if uncontested collections cases and divorce cases are omitted and if insurance companies are treated as the real defendant in tort cases where insurance is present, individuals are almost always plaintiffs (Grossman *et al.*, 1982).

Table 1. Summary Descriptions of the Variables in the Lawyer Effort Model

Cluster	Variable	Type	Description	means (and standard deviations)		expected direction ^a
				hourly	contingent	
PARTY INTERACTION (measures of pretrial activities by the other side)						
1	Pleadings	count ^b	number of pleading documents filed by other side	1.47 (1.13)	1.30 (1.29)	+
2	Motions	count	number of motions initiated by other side	0.63 (1.19)	0.86 (1.60)	+
3	Discovery	count	number of discovery events (depositions, motions, etc.) initiated by other side	2.14 (3.13)	2.18 (3.21)	+
4	Briefs	count	number of briefs filed by other side	0.70 (1.30)	0.62 (1.37)	+
CASE CHARACTERISTICS						
5	Stakes ^c	lawyer's estimate	lawyer's estimate of what her client should have been willing to accept or to do to settle the case	\$11,449 (\$7,334)	\$14,390 (\$6,567)	+
6	Complexity	lawyer's estimate	lawyer's subjective estimate of the complexity of the case (five-point scale)	2.39 (1.11)	2.53 (1.19)	+
7	Duration	count	number of days from filing to termination	422.84 (283.46)	418.97 (295.46)	+
PARTICIPANT CHARACTERISTICS						
8	Client Type	dummy	1 for individuals; 0 for organizations (as indicated by the court record)	0.29 (0.45)	0.84 (0.37)	-
LAWYER CHARACTERISTICS						
9	Specialization	factor score	indicator of degree to which the case fell within an area that the lawyer considered to be her specialty	0.08 (0.90)	0.06 (0.85)	-
10	Law School Performance	factor score	indicator of lawyer's performance based on rank in class and participation on law review	0.06 (0.69)	-0.03 (0.65)	-
11	General Experience	count	number of years lawyer has been practicing law	11.46 (8.93)	10.03 (9.06)	-
12	Litigation Experience	—	proportion of time devoted to litigation	68.31 (27.39)	66.26 (23.96)	-
13	Personal Capacity	factor score	measure based on items taken from Robinson and Shaver's (1989: 102-5) scale	0.04 (0.67)	-0.04 (0.65)	-
14	Craftsmanship	lawyer's estimate	lawyer's sense of professional craftsmanship (three-point scale)	2.51 (0.69)	2.50 (0.68)	+
PARTICIPANT GOALS						
Client Goals						
15	Get Most/Pay Least	dichotomy	client sought to get the most or pay the least (coded 1); client did not have this goal (coded 0)	0.44 (0.50)	0.32 (0.47)	+
16	Get Fair/Pay Fair	dichotomy	client sought to get a fair amount or pay a fair amount (coded 1); client did not have this goal (coded 0)	0.32 (0.47)	0.49 (0.50)	-

Table 1
(continued)

Cluster	Variable	Type	Description	means (and standard deviations)		expected direction ^a
				hourly	contingent	
<i>Lawyer Goals (as measured by reasons lawyer took the case)</i>						
17	Challenge	factor score	lawyer took case because it presented a challenge	-0.09 (0.85)	0.08 (0.88)	+
18	Public Service	factor score	lawyer took case because it provided an opportunity to serve the public or because of sympathy for the client	-0.15 (0.71)	0.06 (0.67)	0
19	Professional Visibility	factor score	the case would increase the lawyer's community standing or improve her position in the firm	0.03 (0.72)	0.05 (0.68)	+
20	Making Money	factor score	the case was taken because of the amount of money that could be earned	-0.08 (0.59)	0.25 (0.66)	-
21	Service to Regular Client	dichotomy	the lawyer took the case to provide service to a regular client	0.62 (0.48)	0.16 (0.36)	0
PROCESSING AND CASE MANAGEMENT						
22	Type of Court	dichotomy	federal court (1); state court (0)	0.56 (0.50)	0.45 (0.50)	0
23	Settlement Discussions	dichotomy	did occur (1); did not occur (0)	0.90 (0.30)	0.90 (0.30)	-
24	Trial	dichotomy	case did go to trial (1); case did not go to trial (0)	0.12 (0.32)	0.12 (0.32)	+
25	Pretrial Events SOP	factor score	use of standard operating procedures for pretrial activities such as pleadings, motions, and discovery	0.01 (0.99)	-0.84 (1.01)	-
26	Estimating Case Value SOP	factor score	use of standard operating procedures for estimating the value of the case	-0.02 (0.97)	-0.05 (1.02)	-
27	Plan for Motions	dichotomy	lawyer used a plan for motions (1); no plan used (0)	0.19 (0.40)	0.13 (0.34)	-
28	Plan for Settlement	dichotomy	lawyer used a plan for obtaining a settlement (1); no plan used (0)	0.70 (0.46)	0.68 (0.47)	-
29	Plan for Discovery	dichotomy	lawyer used a plan in conducting discovery (1); no plan used (0)	0.60 (0.49)	0.64 (0.48)	-
30	Client Control and Participation	factor score	client sought to exercise control over the lawyer's activity and to participate actively in decision-making regarding the case	0.20 (0.72)	-0.23 (0.71)	+ or -

^aA "+" indicates that a positive relationship is expected; a "-" indicates a negative relationship; and a "0" indicates that the direction of the relationship is not hypothesized in advance.

^b"Count" indicates that the variable was a simple count of some type of event or some other discrete entity (e.g., days—for duration).

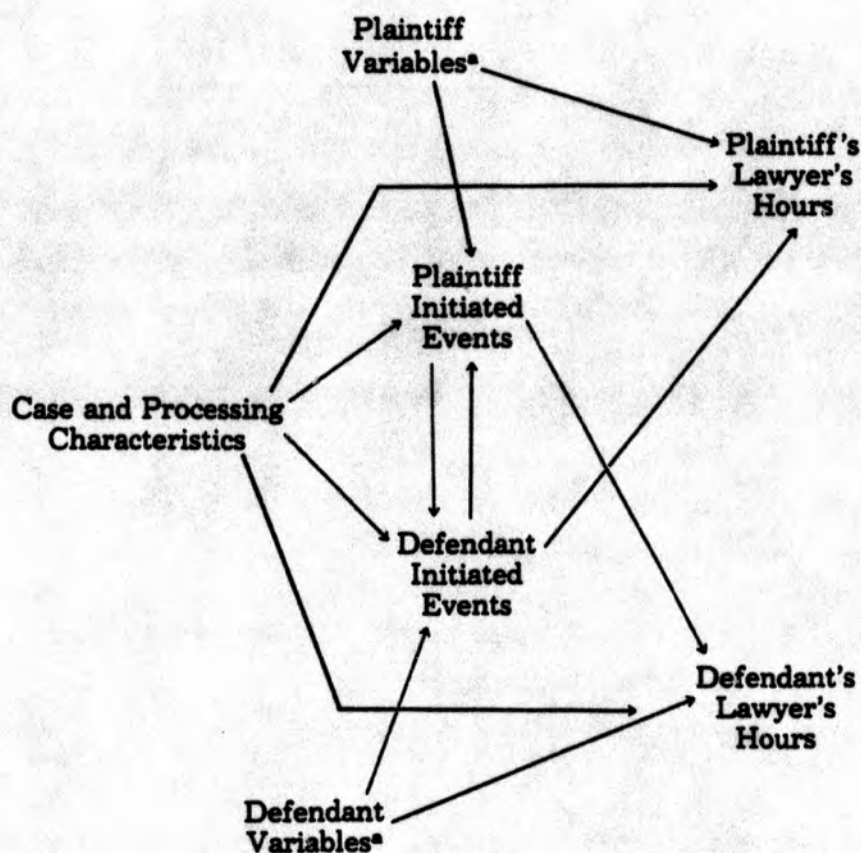
^cIn the actual analysis, stakes was adjusted for nonlinearity; the particular adjustment used was to take the square root of stakes.

Although common sense would suggest that the amount at *stake* in the case should be the most important determinant of the amount of time spent on the case by lawyers, we do not treat stakes as the *primary* determinant of the level of lawyer effort (although we do recognize its importance and include it as one of the case characteristics).¹² Lawyers often fail to spend

¹² At the start of our research, we did see stakes as the primary factor, with the other variables serving as modifiers of the basic relationship (Trubek, 1980-81). See Trubek *et al.* (1983b) or Kritzer *et al.* (1984) for a discussion of how this view came to be modified.

as much time on a case as the stakes may seem to warrant because the case settles before that effort has been expended. As we see it, therefore, stakes do not push the investment process along; rather they tend to place a cap on it.

Figure 1. Interaction Model of Lawyer Effort



- * The "party" variables include nature of participants, participant goals, and case management indicators.

It is not the stakes but the action of side A that is the primary determinant of the action of side B, and vice versa. Figure 1 suggests an image of this action-reaction model. Each lawyer's effort is a function of (1) the other side's action, (2) case and processing characteristics, and (3) "party" variables (i.e., goals, characteristics, and management efforts). A full analysis of this model would seek to account for each side's level of lawyer effort, each side's "initiatives," and each side's

goals and management decisions. The notion of interaction built into this model is intuitively pleasing because it is consistent with dispute processing in an adversary process like the American civil justice system. Because our purpose is to explain the "end variable," effort, we need focus only on the linkages in the model leading directly to the hours lawyers put in.¹³

We tested our theoretical model by linear regression analysis.¹⁴ This statistical technique allows us to measure the

¹³ The analysis of initiatives would be greatly complicated by the two-way linkage shown in Figure 1. It would also require a type of data set that is almost impossible to obtain (see Kritzer, 1980-81: 506, 520-21).

¹⁴ Before applying linear regression, we checked our independent variables for curvilinear relationships with the dependent variable, hours worked. The only variable for which curvilinearity appeared to be a significant problem was stakes. A curvilinear form made intuitive sense because one would expect, for example, that the difference between the time taken by two cases, one with \$2,000 at stake and the other with \$10,000 at stake, would be greater than the difference in the time taken by two cases, one with \$102,000 at stake and the other with \$110,000 at stake. A number of transformations were examined to adjust for this curvilinearity. Using the square root of the "raw" stakes measures seemed to work best; thus, all the analyses reported below use the square root of stakes rather than the original value.

We also checked our data for multicollinearity, outliers, and heteroscedasticity and found all three. We examined all our predictor variables for possible multicollinearity (high intercorrelations) and found problems only for our original standard operating procedure indicators (which included separate indicators regarding SOPs for estimating case value, discovery, motions, and pleadings). The SOP variables used in the analysis, (25) pretrial events SOP and (26) estimating case value SOP, were factor scores created in order to alleviate this problem (we started with four SOP indicators).

To examine the impact of outliers (occasional "big cases" picked up by our random sampling procedure) on our results, we performed the regression analysis with and without the outliers in the data set. Outliers were defined as those cases requiring more than 500 hours of lawyer time, involving more than \$250,000, taking more than 1500 days from filing to termination, or having more than 20 discovery events, 10 motions, or 10 briefs. For the hourly fee lawyers the inclusion or exclusion of the outliers had minimal impact on our results, but for the contingent fee lawyers the impact of outliers was clearly noticeable. For the sake of consistency, we omitted outliers for both hourly and contingent fee lawyers.

The last problem we had to deal with was heteroscedasticity, a violation of the assumption in regression analysis that the variance of the equation "error term" (i.e., the difference between the observed and predicted values of the dependent variable) be constant for all systematically identifiable subsets of observations. Heteroscedasticity tends to lower severely the power of significance tests. Common sense suggests that one should expect a greater range of predictive error for big cases than for small cases; this is consistent with the notion that stakes serve to "cap" the level of investment of time (and money) in a case. To adjust for the heteroscedasticity in our data, we applied an adjustment factor to each observation; this yielded a set of "corrected" regression equations. The specific adjustment used was to divide all of the variables for each case by the square root of stakes. For more detail on the rationale for the procedure, see Hilton (1976: 95-100). For most analytic purposes, the "corrected" results were employed, and it is these results that we generally report below.

independent effect of each explanatory variable holding the effect of the other variables constant. The dependent variable is lawyer's hours. The independent variables are the variables in the clusters specified in our model. It is important to note that the number of lawyer hours we report in our analysis below represents estimates based on our statistical model. Since we could not obtain samples with identical cases (except for fee arrangement), we have "created" such cases statistically using linear regression.

It became clear almost from the start of our analysis that hourly fee lawyers behaved rather differently from contingent fee lawyers—so differently, as reflected in the coefficients of many of our dependent variables, that it is statistically inappropriate to include fee arrangement as just another variable in our regression equations.¹⁵ We thus estimated two separate equations—one for hourly fee lawyers and the other for contingent fee lawyers. The amount of variance explained by the models was very similar for the two sets of lawyers. As shown in Table 2, R^2 is .494 for hourly lawyers and .525 for contingent fee lawyers.¹⁶ Also, three clusters of variables have important influences on hours for each group; two of these are the same for both types of lawyers (party interaction and participant goals). However, the third important variable type differs for the two (processing decisions for hourly fee lawyers and case characteristics for contingent fee lawyers). The

¹⁵ If it were not for the fact that the coefficient sets for hourly and contingent fee lawyers differed significantly, we could have tested the hypothesis that one group of lawyers spent significantly more time than the other by simply adding a dummy variable for fee arrangement to the equation. In the course of the analysis, we did this just to see what would happen; the *t*-statistics for the corrected and uncorrected forms (606 degrees of freedom) were 0.35 and 0.41, respectively, neither of which indicates statistical significance.

Given that the coefficients are in fact different for the two subgroups of lawyers, the effort gap will vary depending upon the specific values the other predictor variables take on. Consequently, one cannot speak of a single value for the effort gap, but must talk about the effort gap for a given situation. If there were only one predictor variable, say stakes, then one could talk about ranges of stakes where the gap does exist and about ranges where there is no gap. See Rogosa (1980) or Friedrich (1982) for more detail on the issues involved. Suffice it to say that there is no way to vary systematically the 30 variables we use; consequently, we will focus on a more limited set of situations.

¹⁶ Since our goal in assessing the overall fit is to look at the "best" fit we can get, we have used the R^2 from the uncorrected (ordinary least squares) regression estimates. Because of the mathematics of the correction for heteroscedasticity, the uncorrected estimate of the equation will always yield a better fit for the equation than will the "corrected" (weighted least squares) regression estimates (see Hilton, 1976: 100). On the other hand, the corrected estimates yield the best information regarding the significance of the contribution of individual variables or groups of variables.

relative importance of the influence of the different explanatory variables is also often substantially different. These differences can be seen in Table 3, though we will defer discussion of the specific differences until later.

Table 2. Summary of Regression Results for Hourly and Contingent Fee Lawyers

Main Group	Subgroup	df	Hourly ^a				Contingent ^b			
			F	p	R ² change	R ² change per df	F	p	R ² change	R ² change per df
I. PARTY INTERACTION (A)		4	11.01	.0001	.05806	.015	4.43	.0018	.06530	.014
II. CASE CHARACTERISTICS (B)		3	7.37	.0001	.02879	.008	13.97	.0001	.11602	.038
III. NATURE OF PARTICIPANTS		7	2.48	.0170	.02289	.005	1.05	.3963	.02289	.003
	C. Client Type	1	0.26	.6123	.00034	.000	4.70	.0312	.01487	.015
	D. Lawyer Characteristics	6	2.65	.0158	.02095	.003	0.40	.8762	.00795	.001
IV. PARTICIPANT GOALS		7	11.04	.0001	.10194	.015	2.87	.0111	.05843	.008
	E. Client Goals	2	15.41	.0001	.04053	.020	3.84	.0239	.02395	.012
	F. Lawyer Goals	5	9.28	.0001	.06117	.012	2.15	.0806	.03362	.007
V. PROCESSING AND MANAGEMENT		9	6.52	.0001	.07748	.008	0.74	.8740	.02072	.002
	G. Processing Decisions	3	6.36	.0003	.02517	.008	1.09	.3561	.01018	.003
	H. Case Management	6	7.85	.0001	.06216	.010	0.71	.6457	.01321	.002
R ²			.49362				.52535			

^aN = 371

^bN = 287

These differences mean that the cases in our samples for the two types of fee arrangements are not generally equivalent, making a comparison between the two groups, other things being equal, more difficult. We make our initial hourly fee/contingent fee comparison, therefore, using three separate estimates: we estimate (a) the time expended by both groups on the "average" contingent fee lawyer case (i.e., the difference between the hours spent by the two groups when each of the explanatory variables is set at its mean value for contingent fee lawyers); (b) the time spent by both groups on the average hourly fee lawyer case (estimated the same way); and (c) the time spent by both groups on the "average" case for the two groups of lawyers combined.

Before presenting the results of these procedures, we must discuss a final methodological complication. As we said earlier, contingent fee lawyers usually represent plaintiffs. Hourly fee lawyers are somewhat more evenly divided: in our sample 71 percent of the hourly fee lawyers represent defendants. This difference raises the question of whether our efforts to measure the effects of fee arrangement might reflect, at least in part, differences between how plaintiffs' and defendants' counsel approach cases. Since contingent fee defendants' counsel are

rare or nonexistent, we cannot carry out the analysis with strict controls for side. We can, however, compare three groups—contingent fee lawyers, hourly fee plaintiffs' lawyers, and hourly fee defendants' lawyers—to try to sort out this question. If hourly fee plaintiffs' lawyers more closely resemble hourly fee defendants' lawyers than contingent fee lawyers, we can tentatively attribute the difference more to fee arrangement than to side.¹⁷

Table 3 presents, in addition to regression results for both sets of lawyers, the equivalent results for hourly fee lawyers broken down by side. Unfortunately, the implications of the breakdown are not clear. In part this reflects the small sample size for hourly fee plaintiffs and collinearity problems (i.e., correlations among the independent variables) that appear to exist *within* these two subgroups.¹⁸ The results for hourly plaintiffs' lawyers appear to fall somewhere between those of hourly defendants' lawyers and contingent fee lawyers. For some variables, hourly plaintiffs' lawyers are closer to hourly defendants' lawyers while on others they are closer to contingent fee lawyers. Consequently, although our observed effects may reflect some influence of side, we can say with a high degree of confidence that there is a fee arrangement effect in addition to any effects of side.¹⁹

¹⁷ One might at first glance be concerned that the results we have presented represent the peculiarities of personal injury litigation since common wisdom is that contingent fees and personal injury cases "go together." This is in fact true, but in a different way than is commonly believed. The table below shows tabulations for the number of respondents by area of law, fee arrangement, and side (for hourly fee lawyers).

	Torts only	Contract only	Both Tort and Contract	Neither Tort nor Contract
Contingent Fee	210	64	20	42
Hourly Fee Plaintiff	14	90	4	35
Hourly Fee Defendant	142	95	15	54

As the table shows, while most tort plaintiffs hire lawyers on a contingent fee basis, many cases not involving torts are handled by contingent fee lawyers as well (see also MacKinnon, 1964: 25-28). Thus, the results reported above for contingent fee lawyers do not simply reflect the peculiarities of personal injury litigation.

¹⁸ The problem of multicollinearity accounts for some of the apparently bizarre results in Table 3 (e.g., the large negative coefficient of the trial variable for hourly plaintiffs' lawyers).

¹⁹ This conclusion is reinforced by a global hypothesis test, also known as a Chow test (see note 26 below). The test showed that hourly fee plaintiffs' lawyers differed in a statistically significant way from both of the other two groups. The significance tests were done with both corrected and uncorrected data:

Table 3. Detailed Regression Results for Hourly and Contingent Fee Lawyers

	Contingent		All Hourly		Hourly Plaintiff		Hourly Defendant	
	b	std. error	b	std. error	b	std. error	b	std. error
I. PARTY INTERACTION								
A. Party Interaction								
1. Pleadings	-2.004	1.684	-2.675	1.875	-4.274	2.782	-4.348	3.022
2. Motions	.145	1.744	-1.085	1.730	5.650	4.151	-.412	2.037
3. Discovery	2.885***	0.881	2.731***	0.832	4.527**	1.787	4.225***	1.046
4. Briefs	4.119*	2.262	8.851***	1.912	4.205	4.889	7.580***	2.201
II. CASE CHARACTERISTICS								
B. Case Characteristics								
5. Stakes	.310***	0.048	.232***	0.051	.234**	.088	.303**	.082
6. Complexity	5.963***	1.798	3.780**	1.465	20.728***	4.222	1.777	1.612
7. Duration	.012*	.006	.013*	0.006	-.002	.018	.001	.007
III. NATURE OF PARTICIPANTS								
C. Client Type								
8. Individual/Organization	-9.440*	4.354	-1.949	3.843	-15.742*	8.124	-5.508	4.531
D. Lawyer Characteristics								
9. Specialization	2.455	2.143	1.872	1.794	-8.048	4.738	3.430	2.014
10. Law School Performance	2.710	2.793	3.442	2.118	-1.336	4.291	6.076**	2.578
11. General Experience	-.038	0.182	-.009	0.179	-.135	0.458	-.070	0.205
12. Litigation Experience	-.038	0.089	.037	0.062	.034	0.128	.088	0.073
13. Personal Capacity	1.144	2.354	-1.228	2.388	-10.770	7.238	1.950	2.694
14. Craftsmanship	-.052	2.170	7.028**	2.357	6.637	6.781	9.447***	2.702
IV. PARTICIPANT GOALS								
E. Client Goals								
15. Get Most/Pay Least	-9.931*	4.359	-18.352***	3.718	-22.539*	13.644	-21.185***	4.223
16. Get Fair/Pay Fair	0.983	3.581	-20.486***	4.259	-13.908*	7.855	-27.488***	5.685
F. Lawyer Goals								
17. Challenge	2.540	2.089	.909	1.898	0.178	5.983	2.889	2.124
18. Public Service	2.944	2.483	-11.017***	2.309	-3.252	4.993	-13.550**	2.805
19. Professional Visibility	0.620	2.578	6.185***	2.043	-5.483	6.087	8.180**	2.383
20. Make Money	3.165	2.480	1.185	2.043	10.020	6.916	0.741	3.022
21. Service to Regular Client	-13.238**	5.119	3.214	3.394	-14.287	9.423	11.037**	4.088
V. PROCESSING AND MANAGEMENT								
G. Processing Decisions								
22. State/Federal	0.341	4.181	14.116***	3.373	0.583	8.785	13.314***	4.008
23. Trial	-.055	6.705	4.637	5.714	-52.285**	21.483	2.372	5.971
24. Settlement Discussions	10.842	6.094	3.022	5.739	15.318	17.935	-1.371	6.865
H. Case Management								
25. Pretrial Events SOP	0.986	1.708	2.676*	1.505	-2.644	3.844	1.763	1.773
26. Estimating Case Value SOP	0.972	1.562	1.397	1.580	-4.251	3.746	.045	1.870
27. Plan for Motions	-11.389	6.725	11.109**	4.029	6.603	11.443	9.127**	4.429
28. Plan for Settlement	-3.487	3.755	-7.281*	3.671	-3.711	8.942	21.423***	3.910
29. Plan for Discovery	-1.179	3.488	15.921***	3.325	5.088	18.545	-9.131*	3.983
30. Client Control and Participation	1.750	2.404	-4.691*	2.192	2.935	4.916	-6.804**	2.519
CONSTANT	-3.335		-21.473		-35.983		-19.098	

*p < .05

**p < .01

***p < .001

	corrected			uncorrected	
	df	F	p	F	p
Contingent versus (hourly plaintiff)	31/313	1.509	.0441	2.039	.0013
Hourly defendant versus (hourly plaintiff)	31/309	2.274	.0002	2.005	.0011

IV. RESULTS

Our estimates²⁰ of the number of hours an hourly fee lawyer and a contingent fee lawyer will spend on the three prototypical cases—the average hourly fee case, the average contingent fee case, and the overall average case—are shown in Table 4. As can be seen, the differences are not substantial. Nor is the direction of effect consistent. For the average contingent fee case, the contingent fee lawyer is expected to spend slightly more time than the hourly fee lawyer (51 versus 48 hours). For the average hourly fee case, the hourly fee lawyer is expected to spend substantially more time (51 versus 42 hours) than the contingent fee lawyer. The overall average is a reflection of the other two combined—the hourly lawyer spends somewhat more time, but not as much more as for the hourly fee average case (50 versus 46 hours).

Table 4. Predicted Number of Hours for the "Typical" Case

	Hourly Fee Lawyer	Contingent Fee Lawyer
"Average" Hourly Fee Case	50.6	42.1
"Average" Contingent Fee Case	47.9	50.7
Overall "Average" Case	49.5	45.7

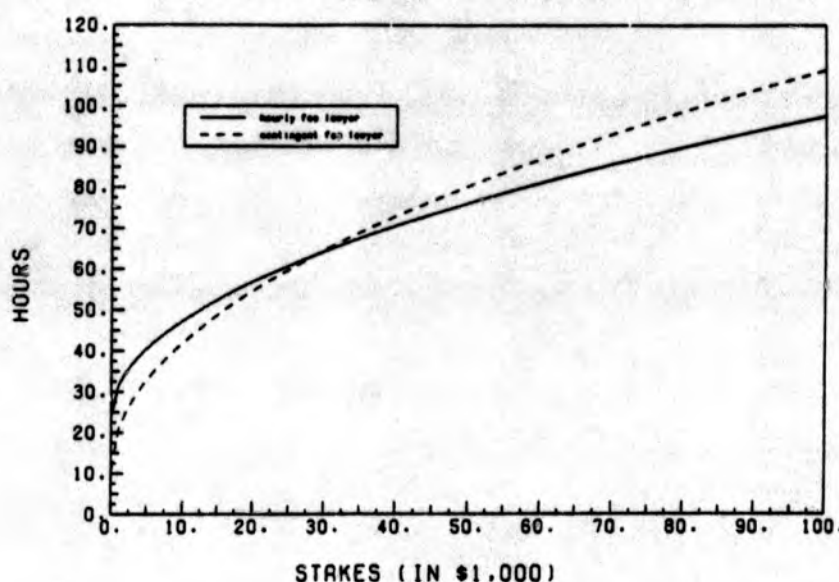
When we disaggregate the impact of fee arrangement by size of stakes (holding all other variables at their mean value for both types of fee arrangement taken together), the interesting pattern shown in Figure 2 appears.²¹ The solid line represents our estimate of the average time investment of hourly fee lawyers, controlling for the other variables in our model, and the broken line represents the estimate for

²⁰ In making our estimates, we have retained our original model rather than discarding the nonsignificant variables in Table 3. We have chosen to do this for theoretical reasons; namely, we believe that our basic model is correct on theoretical grounds, and we prefer not to risk the problems created by misspecification arising from the omission of variables, particularly since there is less danger from misspecification by inclusion than from misspecification by exclusion (see Deegan, 1974; 1976).

²¹ We have selected stakes as the case characteristic to vary because it seemed to us that in most discussions of litigation, the first question that is typically asked is, "what's at stake?" Moreover, most discussions relating to "access to justice" raise the question of "modest" cases (typically under \$10,000), and the problem of providing legal services and other dispute processing services in such cases (see, for example, Johnson *et al.*, 1978).

contingent fee lawyers.²² What Figure 2 suggests is that contingent fee lawyers put in less effort for small cases than do hourly fee lawyers, but they put in *more* time for "big" cases. Such behavior would be economically rational. The contingent fee lawyer's potential return is closely related to the potential recovery (i.e., stakes), and if a greater effort with a "big" case will substantially increase the recovery, lawyers would be behaving rationally in expending more effort.

Figure 2. Expected Lawyer Time by Stakes



Before we can draw any conclusions with confidence, we must see whether the differences shown in the figure are statistically significant.²³ To do this we relied upon the

²² The reason that the lines curve even though the regression equation is linear is that the predictive equation uses the square root of stakes, whereas Figure 2 uses the untransformed version of stakes.

²³ There is another problem with this interpretation as well. While it is rational for the contingent fee lawyer to spend more time on a big case than she would spend on a small case, it is not altogether clear why she would spend more time than the hourly fee lawyer. It may be that the contingent fee lawyer spends more time on big cases because she does not have to justify her time expenditure to the client and can behave in a risk-neutral fashion while the hourly fee lawyer has clients who are more likely to be risk-averse and thus unwilling to risk having to pay for all the time that the lawyer might reasonably spend on the case. The problem with this explanation is that the hourly fee lawyer is very likely to be representing an organization, which, as a "repeat player" (see Galanter, 1974) in the litigation game, should behave in a risk-neutral fashion. Also, one could argue that it is the contingent fee lawyer who should be risk-averse, since the lawyer stands to receive no compensation if she loses the case (though if she has no other cases to work on, the value of the lost time is minimal).

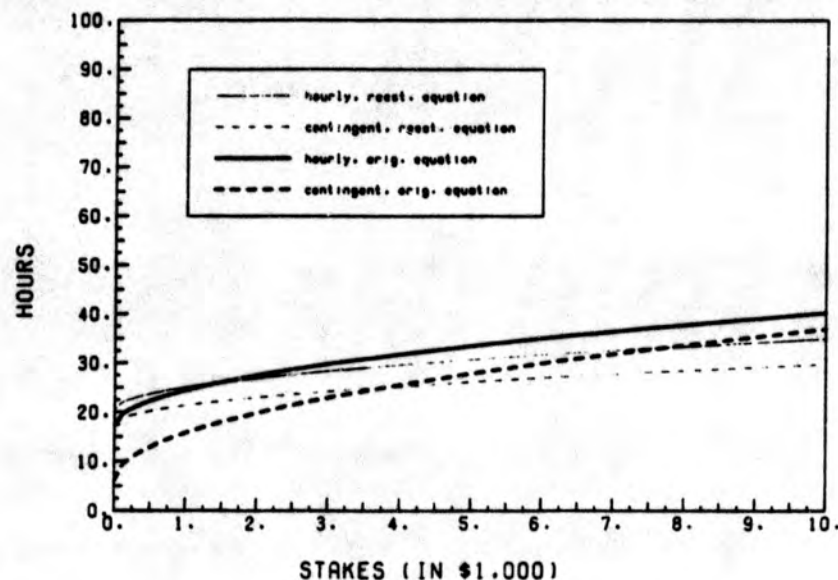
sampling errors of the estimated means for lawyer hours for \$1,000 increments in stakes (from zero to \$100,000). These sampling errors are a function of the deviation of the particular stakes value from the mean of stakes; the sampling errors are smallest near the mean and increase rapidly as the distance from the mean increases. Let us denote the estimated mean of lawyer hours for fee lawyers as $\hat{\mu}_H$ and its sampling errors as $\hat{\sigma}_H$; the corresponding estimates for contingent fee lawyers are $\hat{\mu}_C$ and $\hat{\sigma}_C$. The test statistic for a given value of stakes is a t-statistic:

$$t = \frac{\hat{\mu}_H - \hat{\mu}_C}{\sqrt{\hat{\sigma}_H^2 + \hat{\sigma}_C^2}}$$

A separate test statistic is computed for each value of stakes.

Using the test, we obtain significant differences only for stakes of \$6,000 or less. At the last point of statistical significance, \$6,000, the gap in lawyer effort is about 7 hours—32 hours for hourly fee lawyers versus 25 hours for contingent fee lawyers. To look more closely at the stakes range for which fee arrangement does have a significant effect on overall hours, we recomputed the value for the two curves using the mean values for cases \$10,000 and under. The revised curves, shown as the heavy lines (solid for hourly, broken for percentage) in Figure 3, are essentially the same as for the equivalent portion

Figure 3. Expected Lawyer Time by Stakes for Small Cases



of Figure 2, since the shape of the curve is determined by the coefficient for stakes. We then reestimated the regression equations using \$10,000 and under cases only, and once again recomputed the curves (shown as the lighter pair of lines in Figure 3). This pair of lines differs from the other pair in two regards. First, they are virtually parallel to one another (i.e., the gap between the lines changes little as stakes move from zero to \$10,000). This is because there is little difference in the stakes coefficients in the \$10,000 and under regressions. Second, they rise at a much slower pace. Elsewhere we have reported that we found little or no relationship between effort and stakes when the analysis is limited to cases involving \$10,000 or less (Kritzer *et al.*, 1984), and this is what is showing up here. Nonetheless, for both pairs of curves, the line for contingent fee lawyers falls below that for hourly fee lawyers, which is consistent with our finding that there is an "effort gap" for cases in the lower stakes range.

Although we have found a statistically significant difference in effort only for cases with relatively modest amounts, this finding is not unimportant. First, as we have reported elsewhere (Trubek *et al.*, 1983a), the median case in state courts (based on cases terminated in 1978), where well over 95 percent of civil cases are filed (cf. Flango *et al.*, 1983: 5), involves about \$4,500 (even after eliminating "small claim" type cases involving less than \$1,000). Thus, our analysis indicates that for something over 50 percent of the civil suits for money damages filed in the United States, lawyers working on a contingent fee basis would put in significantly less time than would lawyers working on an hourly fee basis.²⁴ Second, as we noted in our discussion of the significance test we employed, the power of the test is greatest in the range in the vicinity of the mean, and thus the lack of significant differences for larger cases may be an artifact of the reduced power of the test.

The absolute size of the gap is not great—7 hours. In relative terms, however, it is sizable—nearly 22 percent of what hourly lawyers spend on a typical \$6,000 case. Should we be concerned about this difference? The answer depends on whether the time differential makes a difference in case

²⁴ Some lawyer activity produces costs other than fees; for instance, medical examinations unconnected to treatment or the stenographic and travel costs of depositions. If such costs were generally relevant in small cases, which we doubt, plaintiffs might secure larger net recoveries with lawyers who did less for them if the difference in effort avoided such costs.

outcome.²⁵

Whether or not the "effort gap" is important in terms of outcome, it is clear that fee arrangement has an important impact on lawyer behavior. The kinds of variables influencing lawyers differ depending on the fee arrangement, even though the overall ability of our model of lawyer effort to account for that effort was about the same for hourly fee and contingent fee lawyers.²⁶ These differences were summarized in Table 2 (which shows the relative influence of the variable clusters). Let us now turn to a more detailed examination of the results shown in Table 3 (looking at the coefficients for contingent fee lawyers and the overall coefficients for hourly fee lawyers).

Both groups of lawyers are influenced by party interaction variables and by participant goals. However, there are major differences *within* the clusters (i.e., which individual variables are important and how important they are). For example, the variable in the party interaction cluster that has the biggest impact for hourly fee lawyers, the number of briefs filed by the other side, also has the largest impact for contingent fee lawyers, but the impact is only half as large in the latter case. In the case characteristics group, all the variables are significant for both groups, but the impact of both stakes and complexity is larger for contingent fee lawyers. Few of the nature of participants variables have an influence for either group of lawyers, but the ones that do are different. Client type is significant for contingent fee lawyers while craftsmanship is significant for hourly fee lawyers. Participant goals are much more important for hourly fee lawyers, both in terms of the number of statistically significant coefficients and in terms of the magnitude of the effects of the individual variables. For example, both the indicators of client goals are significant for hourly fee lawyers, whereas only one is significant for contingent fee lawyers (and that one is about half the size of the corresponding coefficient for hourly fee

²⁵ We have conducted some analyses of case outcomes (see Kritzer *et al.*, 1985) and have been unable to detect any relationship between outcomes and effort for contingent fee lawyers. This analysis has not explored, to date, the influence of relative effort (i.e., the impact of the opposing party's lawyer's effort).

²⁶ Even though the differences are quite clear, it is worthwhile to test formally the hypothesis that the set of coefficients for hourly fee lawyers differs from the set for contingent fee lawyers. This was done using the method described by Specht and Warren (1976), which is also known as the Chow test. The test was done for both the corrected and uncorrected form of the equation. Both tests produced highly significant F statistics (30 and 576 degrees of freedom), 2.118 for the corrected form ($p < .001$) and 1.878 for the uncorrected form ($p < .01$).

lawyers). None of the processing and management variables are significant for contingent fee lawyers whereas most are significant for hourly fee lawyers; furthermore, the values of the coefficients differ sharply for the two groups.²⁷ The one variable that was expected to have different effects for the two groups of lawyers, client control, has the expected effect for hourly fee lawyers, but has no significant influence (though the sign is in the predicted direction) for contingent fee lawyers.²⁸

The time allocation of hourly fee and contingent fee lawyers is dependent on different factors. Contingent fee lawyers appear to be highly sensitive to the potential productivity of their time and are less affected by craft-oriented factors. This effect can be seen in two variables: craftsmanship and response to opposing party's briefs. The contingent fee lawyer does spend time in response to the opposing side's briefs, but that response involves half as much time per brief as the response of hourly fee lawyers.²⁹ While the hourly fee lawyer is strongly influenced by commitment to craftsmanship, the contingent fee lawyer is not. On the other hand, the level of effort of contingent fee lawyers goes up at a faster rate as the level of stakes increases than that of hourly fee lawyers. In other words, the contingent fee lawyer appears sensitive to the potential return to be achieved from a case, which is closely related to the stakes. The hourly fee lawyer's return from a case is not as tied to stakes, and other types of considerations (e.g., the client's goals, the nature of the forum, etc.) have a greater influence.

Before turning to our conclusions, we should briefly explore the *side* versus *fee arrangement* question as reflected in the results shown in Table 3. As we noted previously, the effect of some variables is dissimilar for hourly fee defendants' and plaintiffs' lawyers while for other variables it is the contingent and hourly plaintiffs' lawyers who have dissimilar

²⁷ We should note that the difference in significance cannot be attributed to the smaller sample size for contingent fee lawyers. With one exception, even if the contingent fee lawyer sample were as large as the hourly fee sample (and everything else were unchanged), the coefficients would not differ significantly from zero; the one exception is *plan for motions*, and there the sign of the coefficient is different.

²⁸ One variable that we have not considered in this analysis is area of law; one might expect that defense lawyers in personal injury cases would differ from other hourly fee lawyers. Where we included area of law as a variable, we found that it exerted no significant influence over and above the effects represented by the other variables in the model (Kritzer et al., 1984).

²⁹ We should note, however, that this might be a "side" effect; as shown in Table 3, the contingent fee coefficient is virtually identical in magnitude to that for the hourly plaintiff, though the latter is not statistically significant.

coefficients. To be more specific, we find substantial differences based on side for court (state versus federal), plan for settlement, client control and participation, and briefs; we find substantial differences based on fee arrangement for discovery events, stakes, and client goals (get most/pay least and get fair/pay fair). For this latter set, the differences are consistent with what the arguments about fee arrangements would lead one to expect: contingent fee lawyers are more sensitive to stakes (which determine their expected return), put in less time on discovery (i.e., try to reduce their time), and are less concerned with their clients' goals. At the same time, the side-based dissimilarities tend to muddy the picture: e.g., where we had strong theoretical reasons to expect contingent fee lawyers and hourly fee lawyers to be influenced differently by client control and participation, the differences we find seem to be side-related; although we found that contingent fee lawyers put in less time than hourly fee lawyers responding to discovery, when it comes to briefs, the differences that we seem to find are between defendants' lawyers and plaintiffs' lawyers (irrespective of fee arrangement). Despite this "haziness," Table 3 shows some clear differences between hourly and contingent fee lawyers, and those differences make theoretical sense.

V. CONCLUSIONS

Simple hypotheses about the relationship between fee arrangements and the way lawyers handle civil cases are misleading, at best. Where such models predict that, other things being equal, contingent fee lawyers would always spend less time on a case than hourly fee lawyers, our data show that this effect occurs only in cases involving less than \$10,000; above that level (if anything) the opposite effect appears to be occurring. Moreover, where simple models suggest that fee arrangements affect lawyer behavior directly, we have found that the effects, when they exist, are more indirect and work through other variables, which themselves must be taken into account before one can understand what difference fee arrangements will make in any particular case.

Second, our analysis suggests that even if contingent fee lawyers and hourly fee lawyers spend similar amounts of time on cases, the factors that affect time allocation differ. Thus, contingent fee lawyers seem to be more sensitive to the productivity of their time and are less influenced by purely craft-oriented considerations. As the amount of money at stake

in a case goes up, the contingent fee lawyer seems to be willing to invest relatively more time in cases.

More than anything else, our study points to the need for additional conceptual and empirical work on fee arrangements before anything definitive can be said about the policy issues that are typically addressed in the literature. We have pointed out that the assumptions underlying some of the criticisms of the contingent fee are questionable. Even if contingent fee lawyers do spend less time on cases than would hourly fee lawyers, the client is still benefited by a low cost, low risk opportunity to pursue a claim which would otherwise be unavailable. When one finds, as we did, that the alleged effort gap may not always exist, there is further reason to question the policy conclusions that have been drawn so far.³⁰

This rationale does not lead to an unqualified defense of the contingent fee against the criticisms that have been leveled at it. We do find an effort gap for many of the cases brought in civil courts. But we do not know whether this gap affects case outcomes, nor do we know whether any lesser outcomes can be justified by offsetting advantages of the contingent fee to the client. Thus, while the study clarifies some empirical and policy issues in the debate over fee arrangements, it certainly does not settle them.

APPENDIX: VARIABLE MEASUREMENT

The specific indicators for each of the variables that our model suggests would be important in accounting for lawyer effort and their construction have previously been reported in detail (see Kritzer *et al.*, 1984). Here we simply summarize the indicators used for each of the clusters.

The variable to be explained is the number of hours that the lawyer(s) reported having worked on the case; if more than one lawyer within a firm had worked on a case, we combined the time for all of the lawyers to arrive at a single figure.

The independent variables were grouped into five separate clusters. The first cluster of explanatory variables was designed to measure *party interaction*. As indicators of interaction, we used counts of each of four types of court events that were initiated by the *other* side; these indicators were chosen because a principal vehicle of the action-reaction process is the formal initiation of activities such as discovery and motions (both procedural and substantive). Our

³⁰ Another policy question concerns the propriety of the fees earned by contingent fee lawyers in "big" cases (see Grady, 1976). Our analysis does not speak directly to that question.

assumption was that each event required a response that would result in the expenditure of lawyer time. Four separate measures were created by counting four distinct types of events: *pleadings* (1),³¹ *nondiscovery motions* (2), *discovery events* including depositions, interrogatories, discovery motions, and the like (3), and *briefs* (4).

The second cluster of explanatory variables measures *case characteristics*. These include measures of the amount of money at stake, the complexity of the case, and the length of time from the date of filing to the date of termination (through judgment or dismissal by whatever means and/or for whatever reason). We have already noted the reasons why we expected *stakes* (5) to be an important determinant of the time invested. The implications of *complexity* (6) also appear intuitively obvious: cases vary in the ease with which questions of law may be answered and proof made. The more complex the law involved, or the more difficult the problems of proof, the more time it should take to conduct the litigation. Our measure of complexity was based on lawyer responses to a question in which they were asked to rate the complexity of the case on a five-point scale. Finally, we expected that the length of time a case took from the filing of the complaint to the termination of the suit would have an independent effect on the number of hours lawyers put in. Cases that stretch over long periods of time may require a lawyer periodically to refresh her memory and may also lead her to "find" things to do. We measured *duration* (7) as the number of days that elapsed from the filing of the case to its termination.

Our third cluster of independent variables deals with the *nature of the participants* (i.e., the lawyers and their clients). We classified clients—*client type* (8)—as individuals or organizations because the literature suggests (Galanter, 1974) that organizations will devote more resources to litigation than individuals. This may, at least in part, reflect the ability of organizations to subsidize legal fees by deducting them as a business expense from taxable income, which is not ordinarily possible for individual litigants.

With respect to lawyers, our information was more extensive. We created six separate indicators designed to measure variation in lawyer characteristics. *Specialization* (9) measures whether the case in our sample fell within the lawyer's specialty or not. *Law school performance* (10) is the lawyer's self-report performance as a law student (i.e., rank in class and participation on the law review). Amount of *general experience* (11) is the number of years the lawyer had been practicing law. *Litigation experience* (12) is the proportion of the lawyer's time devoted to litigation. *Personal capacity* (13) is a measure of the lawyer's feelings of efficacy based on a standard measure. Lastly, *craftsmanship* (14) is the likelihood (self-reported) of spending extra time to make marginal improvements on legal documents; the more likely this was, the higher the "craftsmanship" score. We expected the first five lawyer characteristic variables, which measure ability and self-confidence, to be inversely related to the amount of time lawyers spent on cases. More experienced,

³¹ The numbers and letters in parentheses are variable numbers and subset flags that we use to index the tables.

specialized, and confident lawyers should not have to spend as much time on cases as attorneys who were newer to the field of law, the courtroom, or to practice in general. The craftsmanship variable was expected to work the other way. One would expect lawyers who are more oriented toward "craftsmanship" to spend more time on their cases, other things equal.

Our fourth cluster of independent variables relates to the *participants' goals*; these we measured for both lawyers and clients using data from the lawyers. We asked lawyers what they thought their *clients' goals* were in the case. The "goals" variable, in a sense, modifies the "stakes" variable. We expected the lawyer whose clients wanted to get the most (or pay the least) to put in more time on a case than the lawyer in an otherwise identical case whose client only wanted "fairness." We assumed that those clients (about 24% of our respondents' clients) who mentioned neither "*get most/pay least*" (15) nor "*get fair/pay fair*" (16) but did mention something else (in response to the open-ended question that we had asked) were primarily concerned with goals other than money.

Since lawyers may have their own motives, which might affect the amount of time they spend on cases, we also asked our respondents why they had taken the case in question. From their answers, we constructed five *lawyer goal* variables designed to measure the predominance of different factors in the lawyer's decision to take the case. These are:

challenge (17)—did the case present a challenge; was it intellectually interesting?

public service (18)—did it provide an opportunity for service to the public; was it taken because of sympathy for the client?

professional visibility (19)—would the case increase the attorney's community standing, improve her position in the firm, create publicity for the firm?

making money (20)—was the case taken primarily for the amount of money the lawyer would earn?

service to regular client (21)—did the lawyer take the case simply to service a regular client?

We felt that variations in these goals were likely to affect hours worked, but we did not have strong expectations concerning the nature of some of the other goals. For example, we thought that the professional visibility and challenge goals might lead to more hours than the making money goal, but we had no *a priori* expectations about the direction of the "public service" variable's effect.

The final cluster of variables we constructed related to the processing and management of the case. During a case a number of key *processing decisions* are made which might affect lawyer effort. The decision whether to file in *state or federal* (22) court, assuming a choice exists, can have an effect because different courts may have different rules and norms that affect the amount of effort required to process a case. Decisions to engage in *settlement discussions* (23) and to take a case to *trial* (24)³² may also have an impact on lawyer effort.

³² The trial variable is taken from the court record and indicates whether a trial was started, even if the case settled during trial.