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The Quiet Revolution in Products Liability: An Empirical Study of Legal Change

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THE QUIET REVOLUTION IN PRODUCTS LIABILITY: AN EMPIRICAL STUDY OF LEGAL CHANGE

James A. Henderson, Jr.*
Theodore Eisenberg**

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INTRODUCTION

Most revolutions are noisy, tumultuous affairs. This is as true of significant shifts in legal doctrine as it is of shifts of political power through force of arms. The pro-plaintiff revolution in products liability in the early 1960s will forever be associated with heroic, martial images, epitomized in Prosser's description of the assault upon, and fall of, the fortified citadel of privity.¹ The same sort of terminology could be aptly used to describe the last five or ten years of state legislative reform activity. Reacting to what many see as "crises" brought on by courts extending liability too far, state legislatures have enacted breathtakingly large numbers of changes in products liability law, ranging from the trivial to the drastic to the draconian.² For anyone who follows products liability, these developments bring to mind the ancient Chinese curse: "May you live in interesting times."

In contrast to these noisy, exuberant events, the revolution to which we refer has gone all but unnoticed. In fact, some followers of the products liability wars will find our hypothesis so contrary to currently shared wisdom as to warrant its summary rejection. This quiet revolution is a significant turn in the direction of judicial decision making away from extending the boundaries of products liability and toward placing significant limitations on plaintiffs' rights to recover in tort for product-related injuries. These changes are quite recent. Looking back on these events in years to come, scholars are likely to trace the turn in judicial lawmaking to the early to mid-1980s. Although some who follow products liability cases closely

1. Prosser, *The Fall of the Citadel (Strict Liability to the Consumer)*, 50 MINN. L. REV. 791 (1966); Prosser, *The Assault Upon the Citadel (Strict Liability to Consumer)*, 69 YALE L.J. 1099 (1960).

2. See generally J. HENDERSON & A. TWERSKI, PRODUCTS LIABILITY: PROBLEMS AND PROCESS 745-49 (1987); Reed & Watkins, *Product Liability Tort Reform: The Case for Federal Action*, 63 NEB. L. REV. 389 (1984); Comment, *The Expanding Scope of Products Liability: New Jersey Extends a Manufacturer's Responsibility to Include Injuries Caused After a Substantial Alteration of Its Product*, 16 SETON HALL L. REV. 722 (1986).

have begun to sense change, even those who track products developments will be surprised to find the roots of the trend in the early 1980s.

Our objective in this Article is to show that changes in judicial decision making are occurring and that current trends favor defendants. The endeavor is important for two reasons. First, this study shows that since the early to mid-1980s policymakers and industry leaders have been operating from questionable, if not false, premises. Industry leaders have characterized products liability lawyers and clients as a "plague of locusts," who "have brought a blood bath for U.S. business and are distorting our traditional values."³ Reacting, one hopes, to somewhat less extreme descriptions of products reality, several federal proposals for products liability reform have been introduced,⁴ and many states have enacted limiting legislation.⁵ The overall impression is one of an area of judge-made law on the rise, threatening to engulf the legal system, harming industry, and requiring legislative reaction to reign in judges.⁶ This Article shows, however, that even before many of the reforms were in effect, products liability had turned an important corner. The judges whom state legislatures sought to reign in had already begun a trend of doctrinal change favoring defendants. This trend is evident in an increasing percentage of published opinions, both routine and groundbreaking, favoring defendants. At the trial court level, at a time when plaintiffs' likelihood of success in products cases is said by many to be increasing,⁷ it has been moving in quite the opposite direction.

3. Dee, *Blood Bath*, 10 ENTERPRISE 3 (1986) (statement by Chairman of the Board of the National Association of Manufacturers).

4. Litan & Winston, *Policy Options*, in *LIABILITY: PERSPECTIVES AND POLICY* 223, 227-28 (R. Litan & C. Winston ed. 1988).

5. *Id.* at 229-33.

6. See generally U.S. DEP'T OF JUSTICE, THE REPORT OF THE TORT POLICY WORKING GROUP ON THE CAUSES, EXTENT AND POLICY IMPLICATIONS OF THE CURRENT CRISIS IN INSURANCE AVAILABILITY AND AFFORDABILITY (1986); U.S. DEP'T OF JUSTICE, AN UPDATE ON THE LIABILITY CRISIS (1987). For acknowledgment, without endorsement, of the widespread concern about products cases, see T. DUNGWORTH, *PRODUCT LIABILITY AND THE BUSINESS SECTOR: LITIGATION TRENDS IN FEDERAL COURTS* 1-3 (1988).

7. P. HUBER, *LIABILITY: THE LEGAL REVOLUTION AND ITS CONSEQUENCES* 10 (1988) ("The likelihood of success rose from 20 to 30 percent in a product case in the 1960s to more than 50 percent in the 1980s. . . ."). It is not clear what measure of success Huber uses. If settlements count as successful cases, then he dramatically understates products cases' success. Products cases, as well as most other cases, settle 70 to 80 percent of the time. Schwab & Eisenberg, *Explaining Constitutional Tort Litigation: The Influence of the Attorney Fees Statute and the Government as Defendant*, 73 CORNELL L. REV. 719, 729 n.36 (1988). Since the higher settlement success rate applies to

The second major reason for considering the quiet revolution is more purely academic. The study and testing of the theory of legal change is maturing. In an article suggesting the shallowness of many assertions of legal change, George Priest raises important methodological questions about whether and how legal change can be detected.⁸ Gary Schwartz's reading of all published opinions in several jurisdictions calls into question notable efforts to characterize nineteenth century tort law as changing to promote industry or efficiency.⁹ Pronouncements of legal trends are less persuasive than they might be if scholars read most cases and studied trial court level activity.¹⁰ This Article is a rare effort to combine comprehensive, national empirical studies of both appellate and trial court activity to support the assertion of changing legal doctrine. It thus represents one possible, though largely untried, approach to the study of legal change.

Describing a legal phenomenon is not the same as explaining it. We plan a subsequent effort devoted to discerning the underlying factors that may account for these changes in products law. For now, it will be enough to show that a quiet revolution is, in fact, taking place. Toward that end, Part I describes the recent state and federal court opinions that first caused us to suspect that change was afoot. It contrasts these decisions with earlier counterparts that extended, rather than contained, the boundaries of products liability. This Part presents strong, albeit anecdotal, evidence that significant change is underway.

most litigation it is not an interesting feature of products litigation. Of cases not settled the 50 percent success figure simply is wrong. *See infra* Part III.

8. Priest, *Measuring Legal Change*, 3 J.L. ECON. & ORG. 193 (1987) (exploring relationship between doctrinal change and trial court level behavior).

9. Schwartz, *The Character of Early American Tort Law*, 36 UCLA L. REV. 641 (1989); Schwartz, *Tort Law and the Economy in Nineteenth Century America: A Reinterpretation*, 90 YALE L.J. 1717 (1981). Professor Schwartz analyzes characterizations of tort law contained in such notable works as L. FRIEDMAN, *A HISTORY OF AMERICAN LAW* (2d ed. 1985), M. HORWITZ, *THE TRANSFORMATION OF AMERICAN LAW* (1977), and Posner, *A Theory of Negligence*, 1 J. LEGAL STUD. 29 (1972).

10. Schwartz, *The Character of Early American Tort Law*, *supra* note 9, at 645-46 n.14. Two other recent products liability studies examine trial court data. L. MANN, *PRODUCTS LIABILITY LAW IN MICHIGAN: SEARCHING FOR A FAIR BALANCE, A REPORT TO GOVERNOR JAMES J. BLANCHARD* (June 1989); UNITED STATES GENERAL ACCOUNTING OFFICE, *REPORT TO THE CHAIRMAN, SUBCOMMITTEE ON COMMERCE, CONSUMER PROTECTION, AND COMPETITIVENESS, COMMITTEE ON ENERGY AND COMMERCE, HOUSE OF REPRESENTATIVES, PRODUCT LIABILITY: VERDICTS AND CASE RESOLUTION IN FIVE STATES* (September 1989). Although neither study examines changes over time, both reach conclusions that are generally consistent with our findings.

Part II moves from traditional, essentially anecdotal scholarship to a more systematic and quantitative look at what has occurred in published, predominantly appellate, products liability decisions in recent years. The results substantiate the conclusion drawn from the anecdotal data. The analysis in this Part might be labelled "quasi-empirical."¹¹ It relies on data collected by one of the authors in the course of a two-year search through thousands of published court decisions preparatory to writing a products liability treatise.

Parts III and IV present an empirical study of recent products liability decisions at the trial court level. Once again, our hypothesis regarding legal change finds strong support. Relying on data gathered by the Administrative Office of the United States Courts, we show that several hypotheses derived from our premise of legal change are borne out in products liability cases brought in federal district courts from 1979 through 1987. Products liability defendants have enjoyed increasingly favorable results during this time period in ways that are consistent with the view that judicial decision making trends have turned in defendants' favor.

I. THE QUIET REVOLUTION REFLECTED IN AN ANECDOTAL SAMPLING OF PUBLISHED COURT DECISIONS

A. *The Background: Judicial Decision Making from the Mid-1960s to the Mid-1980s*

To set the scene for the unusual court decisions of recent years, we briefly describe decisions that epitomized the decades preceding our sampling. After the citadel of privity had fallen in most American jurisdictions by the mid- to late 1960s, courts let the plaintiffs' bar take full advantage of its victory. Other single-factor barriers to recovery, such as the patent danger rule¹² and the bystander rule,¹³ fell in the decade that followed. After the elimination of those gatekeeper barriers to reaching the jury, more significant prizes waited to be won. Courts steadily extended the formal boundaries of strict

11. The modifier "quasi" is used because the data are arranged and classified according to admittedly subjective standards. But the context in which the author applied the standards suggests that the data are unbiased and reliably support the conclusions reached. See *infra* text accompanying notes 95-106.

12. See, e.g., *Micallef v. Miehle Co.*, 39 N.Y.2d 376, 348 N.E.2d 571, 384 N.Y.S.2d 115 (1976). See generally J. HENDERSON & A. TWERSKI, *supra* note 2, at 542-44.

13. See, e.g., *Elmore v. American Motors Corp.*, 70 Cal. 2d 578, 451 P.2d 84, 75 Cal. Rptr. 652 (1969). See generally J. HENDERSON & A. TWERSKI, *supra* note 2, at 183-84.

products liability to include an impressive array of new types of transactions and categories of defendants.¹⁴ Partly through expansions of doctrine and partly through improvements in trial techniques and tactics, plaintiffs found it increasingly easy to reach juries with product defect claims. Failure-to-warn cases also blossomed during this period to the point that by the mid-1980s, pleadings and rhetoric practically replaced proof as the major prerequisites to recovery.¹⁵

The last great frontier to be crossed was liability for defective product design. From the beginning, manufacturers had been held liable for faulty, self-defeating product designs.¹⁶ But courts generally were reluctant, until the mid-1970s, to impose liability for harm caused by product designs that performed exactly as they were intended to perform.¹⁷ For example, when a driver of an automobile inadvertently crashed into a tree, courts traditionally refused to consider seriously the argument that the vehicle should have been designed to prevent or reduce injury to its occupants.¹⁸ Notwithstanding predictions of doom from some quarters,¹⁹ courts gradually overcame their reluctance and by the late 1970s and the early 1980s they routinely imposed liability for harm caused by manufacturers' conscious design choices.²⁰ Indeed, courts in the various jurisdictions seemed to compete with each other to see who could make it easiest for plaintiffs to reach juries with claims of defective product design.²¹

As the decade of the 1980s arrived, the products liability agenda of the plaintiffs' bar was ambitious, but appeared to be well

14. See Henderson, *Extending the Boundaries of Strict Products Liability: Implications of the Theory of the Second Best*, 128 U. PA. L. REV. 1036, 1042-59 (1980).

15. See generally J. Henderson & A. Twerski, *Doctrinal Collapse in Products Liability: The Empty Shell of Failure to Warn* (unpublished manuscript).

16. See, e.g., *Schild Bantum Co. v. Greif*, 161 So. 2d 266 (Fla. Dist. Ct. App. 1964) (defective brakes); *Wilson v. Lowe's Asheboro Hardware*, 259 N.C. 660, 131 S.E.2d 501 (1963) (defective ladder).

17. See generally Henderson, *Judicial Review of Manufacturers' Conscious Design Choices: The Limits of Adjudication*, 73 COLUM. L. REV. 1531 (1973).

18. The leading case is *Evans v. General Motors Corp.*, 359 F.2d 822 (7th Cir.), cert. denied, 385 U.S. 836 (1966), overruled by *Huff v. White Motor Corp.*, 565 F.2d 104 (7th Cir. 1977).

19. See Henderson, *supra* note 17.

20. See, e.g., *Thibault v. Sears, Roebuck and Co.*, 118 N.H. 802, 395 A.2d 843 (1978); *Voss v. Black & Decker Mfg. Co.*, 59 N.Y.2d 102, 450 N.E.2d 204, 463 N.Y.S.2d 398 (1983); *Turner v. General Motors Corp.*, 584 S.W.2d 844 (Tex. 1979).

21. See Henderson, *Renewed Judicial Controversy Over Defective Product Design: Toward the Preservation of an Emerging Consensus*, 63 MINN. L. REV. 773, 782-804 (1979).

within its grasp. Extending product design liability continued to offer the greatest promise for significant gains. At the head of most plaintiffs' wish lists was persuading courts to review, and condemn as defective, entire categories of product designs, including hand-guns,²² cigarettes,²³ alcoholic beverages,²⁴ swimming pools,²⁵ electricity,²⁶ and off-road, all-terrain vehicles.²⁷ With an indefatigable determination that would have made Dean Prosser proud, plaintiffs stormed the barriers that traditionally prevented recovery in such cases. They met with enough success to create the reasonable expectation that it was just a matter of time before those citadels fell in turn.²⁸

Liability for harm caused by prescription drugs, another area of traditionally pro-defendant products liability doctrine, was under heavy siege in the late 1970s and early 1980s. Traditionally, drug companies have escaped strict liability if they complied with FDA regulations and acted reasonably in warning prescribing physicians of product-related risks.²⁹ Courts would not review the designs of prescription drugs, refusing to second-guess the medical profession, the FDA, or the pharmaceutical industry.³⁰ Plaintiffs attacked this traditional approach on at least three broad fronts: first, they argued that drug companies brainwash doctors so forcefully through

22. See, e.g., *Kelley v. R.G. Indus.*, 304 Md. 124, 497 A.2d 1143 (1985).

23. See, e.g., *Cipollone v. Liggett Group, Inc.*, 644 F. Supp. 283 (D.N.J.) (defendant precluded from introducing collateral benefit evidence as defense to strict products liability claim), *cert. denied*, 479 U.S. 1043 (1986).

24. See, e.g., *Hon v. Stroh Brewery Co.*, 835 F.2d 510 (3d Cir. 1987).

25. See, e.g., *O'Brien v. Muskin Corp.*, 94 N.J. 169, 463 A.2d 298 (1983).

26. See, e.g., *Pierce v. Pacific Gas & Elec.*, 166 Cal. App. 3d 68, 212 Cal. Rptr. 283 (1985); *Public Serv. Ind., Inc. v. Nichols*, 494 N.E.2d 349 (Ind. Ct. App. 1986); *Shriner v. Pennsylvania Power & Light Co.*, 348 Pa. Super. 177, 501 A.2d 1128 (1985).

27. See, e.g., *Baughn v. Honda Motor Co.*, 107 Wash. 2d 127, 727 P.2d 655 (1986).

28. See *supra* notes 22-27. See generally Fisher, *Are Handgun Manufacturers Strictly Liable in Tort?*, 56 CAL. ST. B.J. 16 (1981); Garner, *Cigarette Dependency and Civil Liability: A Modest Proposal*, 53 S. CAL. L. REV. 1423 (1980); O'Shea, *Alcohol and Tobacco Manufacturers and Sellers: Liability in a Post-Alvis Era*, 73 ILL. B.J. 510 (1985); Turley & Harrison, *Strict Tort Liability of Handgun Suppliers*, 6 HAMLIN L. REV. 285 (1983); Speiser, *Disarming the Handgun Problem by Directly Suing Arms Makers*, Nat'l L.J., June 8, 1981, at 29, col. 2.

29. See, e.g., *Cochran v. Brooke*, 243 Or. 89, 409 P.2d 904 (1966); see also RESTATEMENT (SECOND) OF TORTS § 402A comment k (1965).

30. The seller of such products, again with the qualification that they are properly prepared and marketed, and proper warning is given, where the situation calls for it, is not to be held to strict liability for unfortunate consequences attending their use, merely because he has undertaken to supply the public with an apparently useful and desirable product, attended with a known but apparently reasonable risk.

RESTATEMENT (SECOND) OF TORTS § 402A comment k (1965).

advertising that warnings are useless;³¹ second, they insisted that the drug companies should also warn patient-consumers directly;³² and third, they urged courts to review the reasonableness of drug designs independently of whether adequate warnings were supplied.³³ Again, sufficient numbers of plaintiffs succeeded on these three fronts by the early 1980s to suggest that a new regime, much more liberal toward plaintiffs, would govern liability for prescription drugs in the not too distant future.³⁴

Other areas of potential judicial expansion that looked promising from the plaintiff's point of view in the late 1970s and early 1980s included the following: The imposition of liability on distributors of prescription drugs and other toxic substances based solely on epidemiological evidence of causal links between those products and plaintiffs' injuries;³⁵ the imposition of strict liability for so-called "long tail" risks that were not scientifically knowable at the time of original distribution by defendant;³⁶ liability for the failure (by virtually every foreign and domestic auto maker) to replace seat belts with passive air bag restraints;³⁷ extension of industry- or market-wide liability theories beyond cases involving the prescription drug DES to include most, if not all, cases in which plaintiffs cannot identify which defendants distributed the product unit(s) that caused injury;³⁸ adoption of increasingly pro-plaintiff rules holding

31. See, e.g., *Stanton ex rel. Brooks v. Astra Pharmaceutical Prods.*, 718 F.2d 553 (3d Cir. 1983); *Salmon v. Parke, Davis & Co.*, 520 F.2d 1359 (4th Cir. 1975); *Stevens v. Parke, Davis & Co.*, 9 Cal. 3d 51, 507 P.2d 653, 107 Cal. Rptr. 45 (1973).

32. See, e.g., *Hurley v. Lederle Laboratories*, 863 F.2d 1173 (5th Cir. 1988); *Polley v. Ciba-Geigy Corp.*, 658 F. Supp. 420 (D. Alaska 1987); *Odgers v. Ortho Pharmaceutical Corp.*, 609 F. Supp. 867 (E.D. Mich. 1985).

33. See, e.g., *Brochu v. Ortho Pharmaceutical Corp.*, 642 F.2d 652 (1st Cir. 1981).

34. See generally *Page, Generic Product Risks: The Case Against Comment k and for Strict Tort Liability*, 58 N.Y.U. L. REV. 853, 891 (1983) ("Both the satisfaction of justifiable expectations on the part of product victims and the achievement of modest advances in safety justify the application of strict liability to harm from unknowable generic hazards.").

35. See, e.g., *Ferebee v. Chevron Chem. Co.*, 736 F.2d 1529 (D.C. Cir.) (paraquat manufacturer held liable based on epidemiological proof of causation), *cert. denied*, 469 U.S. 1062 (1984). The drug Bendectin appeared to be the most likely vehicle to take plaintiffs over the top on this issue. See, e.g., *Oxendine v. Merrell Dow Pharmaceuticals*, 506 A.2d 1100 (D.C. 1986) (Bendectin manufacturer held liable based on epidemiological proof of causation).

36. See, e.g., *Beshada v. Johns-Manville Prods. Corp.*, 90 N.J. 191, 447 A.2d 539 (1982) (asbestos manufacturer legally responsible for dangers that were undiscoverable at the time of manufacture).

37. See, e.g., *Murphy v. Nissan Motor Corp.*, 650 F. Supp. 922 (E.D.N.Y. 1987).

38. The leading case imposing group liability on DES manufacturers is *Sindell v. Abbott Laboratories*, 26 Cal. 3d 588, 607 P.2d 924, 163 Cal. Rptr. 132, *cert. denied*, 449 U.S. 912 (1980). In the early 1980s, courts applied this same approach to non-DES

successor corporations liable for harm caused by defective products distributed earlier by their corporate predecessors;³⁹ expansion of the size and frequency of punitive damage awards;⁴⁰ and increases in the extent to which responsibility for product-related workplace injuries are shifted from admittedly negligent employers to manufacturers and distributors of the products causing injury.⁴¹

That plaintiffs' efforts in these regards had already begun to succeed in the late 1970s and early 1980s is reflected not only in published decisions but also in the rising levels of alarm voiced by business concerns in the popular media⁴² and in the extent to which state legislatures began to consider and enact statutes aimed at undoing these expansionary trends in judicial lawmaking.⁴³ Taken together, the body of case law from the mid-1960s to the mid-1980s reflects an attitude, widely shared among judges, that our products liability system plays an important social insurance role in making America a safer, better place in which to live and work.⁴⁴

The early 1980s seemed to foreshadow a decade of courts and legislatures locked in power struggles borne of fundamental differ-

cases. See, e.g., *Morris v. Parke, Davis & Co.*, 573 F. Supp. 1324 (C.D. Cal. 1983) (vaccine); *Copeland v. Celotex Corp.*, 447 So. 2d 908 (Fla. Dist. Ct. App. 1984) (asbestos), *quashed*, 471 So. 2d 533 (Fla. 1985).

39. See, e.g., *Ray v. Alad Corp.*, 19 Cal. 3d 22, 560 P.2d 3, 136 Cal. Rptr. 574 (1977) (leading case).

40. See, e.g., *Palmer v. A. H. Robins Co.*, 684 P.2d 187, 204 (Colo. 1984) (\$6,200,000 in punitive damages against manufacturer of defective intrauterine device for trying to profit by making "exaggerated statements regarding the safety and efficacy of its product"); *Kearney v. Kansas Pub. Servs. Co.*, 233 Kan. 492, 665 P.2d 757 (1983) (\$80,000 in punitive damages against public utility after natural gas explosion because utility had knowledge of dangerous condition). The percentage of products liability trials in which punitive damages were awarded increased in San Francisco from less than one percent through 1979 to six percent in 1980-1984 and increased in Cook County, Illinois from zero percent through 1979 to one percent in 1980-1984. D. HENSLE, *SUMMARY OF RESEARCH RESULTS ON PRODUCT LIABILITY* 5 (1986). However, because the absolute numbers are small, these percentage changes probably are not meaningful. *Id.*

41. See, e.g., *Soto v. E.W. Bliss Div. of Gulf & W. Mfg. Co.*, 116 Ill. App. 3d 880, 452 N.E.2d 572 (1983) (upheld verdict against manufacturer of multifunctional punch press even though purchaser-employer had altered the press); *Duke v. Gulf & W. Mfg. Co.*, 660 S.W.2d 404 (Mo. Ct. App. 1983) (upheld verdict against manufacturer of power press even though purchaser-employer had altered the press).

42. See *supra* note 3 and accompanying text; N.Y. Times, Mar. 24, 1985, at IV 22, col. 1 (editorial) (urging judges to take steps against the increasing number of weak personal injury suits in which manufacturers are forced to settle to avoid high cost of litigation).

43. See J. HENDERSON & A. TWERSKI, *supra* note 2, at 745-49.

44. See generally H. STEINER, *MORAL ARGUMENT AND SOCIAL VISION IN THE COURTS: A STUDY OF TORT ACCIDENT LAW* 14-91 (1987); Priest, *The Current Insurance Crisis and Modern Tort Law*, 96 YALE L.J. 1521, 1534-39 (1987).

ences in outlook. Judges would push the products liability boundaries further and further, and legislatures would try to contain such activity by statute. Judges, in turn, could be expected to scrutinize the new legislation carefully and to set it aside frequently as being antithetical to the values reflected in the state constitutions.⁴⁵ Even when reform statutes passed constitutional muster, courts could be expected to circumvent them, devising even more expansionary liability theories with which to meet the pressing social needs of injured plaintiffs.⁴⁶

B. *Recent Developments: Judicial Decision Making in the Mid-to Late 1980s*

Although it is difficult to pinpoint precisely, sometime in the early to mid-1980s courts began to publish decisions that, taken in the aggregate, clearly signal a significant change in the direction of judicial lawmaking in products liability. Parts II and III of this Article substantiate this change empirically. Our task here is to review an anecdotal sampling of these decisions to show how remarkably at odds they are with the prevailing judicial outlook over the preceding twenty-year period described above. Our objective is to convey a sense of the kinds of recent court decisions that first prompted our intuition that significant change was underway.⁴⁷

45. See, e.g., *Kluger v. White*, 281 So. 2d 1 (Fla. 1973) (no-fault statute declared unconstitutional); *Wright v. Central Du Page Hosp. Ass'n*, 63 Ill. 2d 313, 347 N.E.2d 736 (1976) (medical malpractice reform statute violated various provisions of the state constitution). See generally Note, *Product Liability Statutes of Repose as Conflicting with State Constitutions: The Plaintiffs Are Winning*, 26 ARIZ. L. REV. 363 (1984); Note, *Legislative Limitations on Medical Malpractice Damages: The Chances of Survival*, 37 MERCER L. REV. 1583 (1986).

46. Perhaps the classic example of a court circumventing remedial tort legislation occurred in Washington state in the mid-1970s. In *Helling v. Carey*, 83 Wash. 2d 514, 519 P.2d 981 (1974), the Washington Supreme Court held an ophthalmologist negligent for not administering a pressure test to detect glaucoma in a patient under the age of forty, notwithstanding clear medical custom not to administer such a test. A subsequent attempt to reverse *Helling* by statute was undermined by a patently non-cooperative interpretation of the reform statute by the same court. See *Gates v. Jensen*, 92 Wash. 2d 246, 595 P.2d 919 (1979).

47. We emphasize decisions published in the past several years only because they are more numerous and tend to be more dramatic. But our findings suggest that the movement began earlier in the 1980s. We have been deliberately selective in choosing which decisions to emphasize in this discussion. Readers who follow products liability will no doubt be able to identify places where we have failed to draw attention to examples running counter to those we emphasize. Once again, in this discussion we are not trying to prove that a change has occurred; we will count noses in the sections that follow.

Judicial opinions in recent products liability cases depart from prior trends in two important ways. First, several cases are outright retreats from prior pro-plaintiff stances. Courts effectively are taking away what they previously have given or, in matters of first impression within a jurisdiction, are refusing to follow the lead of other courts that had earlier adopted a pro-plaintiff rule. Second, in an area that developed for plaintiffs as rapidly as did products liability, refusals to extend doctrine are almost as significant as withdrawals from earlier holdings. The opinions show that courts now exhibit a novel reluctance to expand established products doctrine to benefit plaintiffs.

In nearly every significant area of products liability litigation, courts in recent years have sent unambiguous signals that they are ready to rethink and pull back on earlier commitments to extend the liability frontiers. Many courts have become tougher on plaintiffs who seek to prove that a manufacturing defect, originating with the defendant, caused their injuries. Perhaps the most striking example is a recent decision by the Ohio Supreme Court. The plaintiff attempted to show that an original defect in the automobile manufactured and sold by the defendant caused a fire that destroyed an automobile and damaged the plaintiff's home.⁴⁸ The auto was relatively new and had manifested electrical wiring difficulties several times before the fire. The fire occurred in the plaintiff's garage while the auto was parked there during the night. An expert testified for the plaintiff that "the cause of the fire was electrical, to a reasonable degree of scientific probability," and eliminated causes other than an electrical fire under the dashboard of the auto.⁴⁹ Another of plaintiff's experts also traced the problem to electrical problems under the dash. It was undenied that the day before the fire, plaintiff had asked the dealer from whom he had bought the car for a replacement vehicle while wiring repairs were effected. When the dealer refused, plaintiff said, angrily, "If this car burns it is your fault because I brought it in here to you."⁵⁰

On the facts of this case, it is inconceivable that a state high court five or ten years ago would have refused to allow this case to reach the jury.⁵¹ However, that is exactly the conclusion reached

48. *State Farm Fire & Casualty Co. v. Chrysler Corp.*, 37 Ohio St. 3d 1, 523 N.E.2d 489 (1988).

49. *Id.* at 3, 523 N.E.2d at 491.

50. *Id.*

51. *See, e.g., Escola v. Coca-Cola Bottling Co.*, 24 Cal. 2d 453, 150 P.2d 436 (1944), one of the earliest cases en route to strict products liability, where the court

unanimously by the Ohio Supreme Court. Pointing to the possibility that the fire might have been caused by, or the defect might have arisen from, other sources not specifically excluded by the plaintiff's witnesses, the court concluded that "it is the plaintiff's burden to respond with evidence which will permit a jury to go beyond speculation and render a judgment in accordance with law. Manufacturers are not insurers of their products."⁵²

Even if this decision stood alone it is an important signal of a shift in judicial temperament. But it does not stand alone. It is only one of several similar decisions imposing tougher standards on plaintiffs' circumstantial proof of manufacturing defects.⁵³

In earlier cases regarding liability for harm caused by prescription drugs, several courts had moved toward imposing liability on drug companies for dangerous drug designs notwithstanding that the defendants had given full and adequate warnings of the relevant risks.⁵⁴ The Supreme Court of California heard arguments early in 1988 in a case involving just that issue.⁵⁵ Given that California in years past has been in the forefront of extending the boundaries of products liability for defective designs,⁵⁶ most observers expected that court to take the lead in moving American products liability to a new, more generous-to-plaintiffs approach to prescription drug liability. To almost everyone's surprise the California high court not only refused unanimously to review prescription drug designs as a

avoided many of the plaintiff's problems of proof by applying the doctrine of *res ipsa loquitur*.

52. *State Farm*, 37 Ohio St. 3d at 8, 523 N.E.2d at 496. That the court was departing rather radically from tradition was not lost on anyone, least of all the court itself. The opinion ends with a remarkable disclaimer that reveals, more clearly than would a full confession, what the court was really doing:

The decision we reach today does not seek to modify the rights of plaintiffs to recover for injuries caused by product defects under the common law of strict products liability, but merely constitutes an application of the law to evidence presented which, when construed in favor of plaintiffs, is insufficient to overcome the defendants' motion for directed verdict.

Id. at 10, 523 N.E.2d at 497.

53. See, e.g., *Sultis v. General Motors Corp.*, 690 F. Supp. 100 (D. Mass. 1988); *Loy v. Firestone Tire & Rubber Co.*, 168 Ill. App. 3d 503, 522 N.E.2d 848 (1988); *Western Sur. & Casualty Co. v. General Elec. Co.*, 433 N.W.2d 444 (Minn. Ct. App. 1988).

54. See *supra* note 33 and accompanying text.

55. See *Brown v. Superior Court (Abbott Laboratories)*, 44 Cal. 3d 1049, 751 P.2d 470, 245 Cal. Rptr. 412 (1988).

56. See *Barker v. Lull Eng'g Co.*, 20 Cal. 3d 413, 573 P.2d 443, 143 Cal. Rptr. 225 (1978).

general matter, but also refused, again unanimously, to adopt a half-way position embraced by other jurisdictions.⁵⁷

A related area of products liability in which courts earlier appeared on the brink of a major, pro-plaintiff breakthrough involved manufacturers' liability for harm allegedly caused by Bendectin, a widely used morning sickness prescription remedy.⁵⁸ These cases are significant because the only proof that the drug caused serious side effects in the newborn children of pregnant women who ingested the drug is epidemiologic. Experts can only say that the side effects appear to occur more frequently in the offspring of those who have taken the drug. Given the sympathetic reactions of several courts earlier in this decade to plaintiffs' epidemiologic proof of causation,⁵⁹ one might have expected that Bendectin cases would be the next breakthrough for plaintiffs in the late 1980s and early 1990s. Several contrary decisions just last year, however, by influential federal courts of appeal, now make it unlikely that Bendectin-related claims have a promising future.⁶⁰

Successor liability was a particularly "hot" products liability topic at the end of the 1970s and the beginning of the 1980s. It seemed to be moving ahead confidently in favor of injured plaintiffs, with courts increasingly willing to allow recovery against successor firms for injuries caused by products manufactured and distributed by predecessor corporations prior to the latter firms being taken over.⁶¹ At the beginning of the 1980s, it appeared to many observers that the so-called "product line" extension of vicarious successor liability, first adopted by the California Supreme Court⁶² and clearly the most pro-plaintiff approach to the problem, would carry

57. The half-way position referred to in the text would invite trial courts to decide on the facts of each case whether a particular drug was or was not unavoidably unsafe. If it was not, then the design would be reviewed on a reasonableness basis. *See, e.g.,* *Kearl v. Lederle Laboratories*, 172 Cal. App. 3d 812, 218 Cal. Rptr. 453 (1985). Perhaps most interesting is that the author of this latest, pro-defendant opinion, Justice Mosk, concurred in a decision ten years earlier that pushed California into the lead in making design cases easy for plaintiffs to prove. *See Barker*, 20 Cal. 3d 413, 573 P.2d 443, 143 Cal. Rptr. 225.

58. *See supra* note 35.

59. *Id.*

60. *See, e.g.,* *Brock v. Merrell Dow Pharmaceuticals, Inc.*, 874 F.2d 307, *modified on rehearing*, 884 F.2d 166 (5th Cir. 1989); *Richardson v. Richardson-Merrell, Inc.*, 857 F.2d 823 (D.C. Cir. 1988), *cert. denied*, 110 S. Ct. 218 (1989). The *Brock* opinion explicitly talks of "retreating" from earlier, more generous approaches to plaintiffs' epidemiological proof in cases of this sort. *Brock*, 874 F.2d at 311.

61. *See, e.g.,* *Ramirez v. Amsted Indus.*, 86 N.J. 332, 431 A.2d 811 (1981); *Dawejko v. Jorgensen Steel Co.*, 290 Pa. Super. 15, 434 A.2d 106 (1981).

62. *See supra* note 39 and accompanying text.

the day.⁶³ Decisions in the last several years, however, make clear that the early predictions were wrong. The "product line" exception to traditional no-liability rules for successor corporations has been flatly rejected by no fewer than six of the highest state courts in recent years.⁶⁴ Indeed, in the period 1983–1989, the score in all courts stands 18 to 3 in favor of rejecting the "product line" approach.⁶⁵ Thus, the high courts in the states that have recently addressed the issue of whether to adopt this approach have, quite literally, stamped in the opposite direction.

Practically the identical fate has befallen efforts by the plaintiffs' bar to extend market-wide liability to cases involving products other than DES.⁶⁶ When the plaintiffs' bar first succeeded in convincing courts to accept market-wide liability in the late 1970s in the DES cases,⁶⁷ many believed that within a short time the market-share approach would spread to a wide range of other product categories. In fact, no such developments have occurred. In the last several years decisions in a number of jurisdictions clearly indicate that courts are in no mood to extend that expansionary doctrine any further.⁶⁸ Indeed, a 1989 decision in the New York Court of Ap-

63. See generally Phillips, *Product Line Continuity and Successor Corporation Liability*, 58 N.Y.U. L. REV. 906 (1983); Wallach, *Products Liability: A Remedy in Search of a Defendant—The Effect of a Sale of Assets and Subsequent Dissolution on Product Dissatisfaction Claims*, 41 MO. L. REV. 321 (1976); Note, *Expanding the Products Liability of Successor Corporations*, 27 HASTINGS L.J. 1305 (1976); Note, *Postdissolution Product Claims and the Emerging Rule of Successor Liability*, 64 VA. L. REV. 861 (1978).

64. *Bullington v. Union Tool Corp.*, 254 Ga. 283, 285, 328 S.E.2d 726, 728 (1985); *DeLapp v. Xtraman, Inc.*, 417 N.W.2d 219, 222 (Iowa 1987); *Simoneau v. South Bend Lathe, Inc.*, 130 N.H. 466, 469, 543 A.2d 407, 409 (1988); *Flaughner v. Cone Automatic Mach. Co.*, 30 Ohio St. 3d 60, 66–67, 507 N.E.2d 331, 337 (1987); *Hamaker v. Kenwel-Jackson Mach., Inc.*, 387 N.W.2d 515, 519–21 (S.D. 1986); *Fish v. Amsted Indus.*, 126 Wis. 2d 293, 309–10, 376 N.W.2d 820, 828 (1985).

65. See *Niccum v. Hydra Tool Corp.*, 438 N.W.2d 96, 99–100 nn.1–2 (Minn. 1989).

66. Under market-wide liability, whenever an injured plaintiff cannot identify which manufacturer within a given industry produced the particular product unit that caused her injury, courts are tempted to allow the plaintiff to join as defendants all, or most, of the members of the industry that distributed units over the relevant time period. They then let the defendants fight over who did or did not distribute the unit that injured the plaintiff. See *supra* note 38.

67. See *Sindell v. Abbott Laboratories*, 26 Cal. 3d 588, 607 P.2d 924, 163 Cal. Rptr. 132, *cert. denied*, 449 U.S. 912 (1980).

68. See, e.g., *Chapman v. American Cyanamid Co.*, 861 F.2d 1515 (11th Cir. 1988) (DPT vaccine); *Long v. Krueger, Inc.*, 686 F. Supp. 514 (E.D. Pa. 1988) (carrier stool); *Cousineau v. Ford Motor Co.*, 140 Mich. App. 19, 363 N.W.2d 721 (tire and wheel assembly), *cert. denied*, 474 U.S. 971 (1985).

peals explicitly limits the market-share approach to a range of products so narrow as to appear, at first glance, arbitrarily selected.⁶⁹

Another recent significant shift in judicial attitudes should be noted. Traditionally, courts have pushed responsibility for product-related workplace injuries over onto the manufacturers of the products causing injury, notwithstanding large elements of irresponsibility on the parts of the employers who control the work environments.⁷⁰ Because worker compensation statutes prevent employees from suing their employers in tort, courts apparently believed that the next best solution, clearly superior to leaving the employees to their limited worker compensation remedies, is to allow recovery in tort against the product manufacturers. No attitude seemed more entrenched and less likely to change than the courts' commitment to allow injured workers to circumvent the worker compensation tort bar by suing third parties in products liability.⁷¹ And yet even here, in the face of this seemingly most unshakable of commitments to helping plaintiffs, a trickle of judicial doubt has, in the last several years, turned into a stream of growing proportions.⁷²

The trend of recent products doctrine extends beyond courts changing their own view or refusing to adopt pro-plaintiff positions that other courts have embraced. There is a new reluctance to apply old pro-plaintiff products liability reasoning to new situations. For example, recent decisions indicate that the prospect of courts labelling entire categories of product designs defective has all but disappeared. It is now quite clear, as it was not five years ago, that American courts are reluctant to condemn as inherently defective

69. *Hymowitz v. Eli Lilly & Co.*, 73 N.Y.2d 487, 539 N.E.2d 1069, 541 N.Y.S.2d 941 (1989).

70. *See supra* note 41 and accompanying text.

71. *See generally* J. HENDERSON & A. TWERSKI, *supra* note 2, at 53-61.

72. *See, e.g.*, *Hardy v. Chemetron Corp.*, 870 F.2d 1007 (5th Cir. 1989) (because of a finding that employer-buyer did not properly maintain the electrical system of a bacon slicer, plaintiff-employee could not recover against manufacturer for physical harm which occurred while plaintiff was cleaning the machine and after she had switched off the power button); *Fenley v. Rouselle Corp.*, 531 So. 2d 304 (Ala. 1988) (because buyer had made substantial modifications to machine press which decreased the press's safety, employee of buyer could not recover in an action against the press manufacturer or the seller); *Tasca v. GTE Prods. Corp.*, 175 Mich. App. 617, 438 N.W.2d 625 (1988) (because tool manufacturer-employer was considered a sophisticated user of cobalt, it, and not the cobalt supplier, had a duty to warn plaintiff-employee of dangers of inhaling substance).

handguns,⁷³ cigarettes,⁷⁴ alcoholic beverages,⁷⁵ swimming pools,⁷⁶ electricity,⁷⁷ off-road vehicles,⁷⁸ or any other broad category of product design.⁷⁹

With respect to the narrower but equally important issue of the alleged defectiveness of particular examples of product designs within these broad categories, no evidence in recent years suggests that courts generally are beginning to turn significantly in the direction of more pro-defendant approaches.⁸⁰ But neither have courts shown any inclination to extend the availability of markedly pro-

73. See, e.g., *Perkins v. F.I.E. Corp.*, 762 F.2d 1250 (5th Cir. 1985) (marketing of handguns not an ultrahazardous activity because harm caused was not a direct result of the marketing but rather of the substandard conduct of third parties).

74. See, e.g., *Cipollone v. Liggett Group, Inc.*, 693 F. Supp. 208 (D.N.J. 1988), where the court held that all claims for post-1966 smoking were preempted by the federal cigarette labeling law. The court allowed a pre-1966 express warranty claim, but on grounds that suggest that cigarette litigation for most plaintiffs is not likely to be worth pursuing.

75. See, e.g., *Maguire v. Pabst Brewing Co.*, 387 N.W.2d 565, 570 (Iowa 1986) (Defendant could not be held liable for sale of an unreasonably dangerous product in a defective condition as recognized in RESTATEMENT (SECOND) OF TORTS § 402A (1965) because the court concluded that "the risks of intoxication presented to consumers of draft beer is [sic] sufficiently known to consumers at large."); *Morris v. Adolph Coors Co.*, 735 S.W.2d 578, 582 (Tex. Ct. App. 1987) (court noting that "[t]he alcoholic beverage manufactured by [the defendants] was not 'defective,' either by design or by marketing, or in an 'unreasonably dangerous condition,' as those terms have been defined by the Restatement of Torts and by prior case law. A product is not in a 'defective' condition when it is safe for normal handling and consumption"). *But see Hon v. Stroh Brewery Co.*, 835 F.2d 510, 514 (3d Cir. 1987) (court finding "a material dispute of fact as to whether Stroh's beer without a warning is safe for its intended purpose and, accordingly, that summary judgment [for defendant] was inappropriate").

76. See, e.g., *Howard v. Poseidon Pools, Inc.*, 72 N.Y.2d 972, 530 N.E.2d 1280, 534 N.Y.S.2d 360 (1988), where the New York high court affirmed summary judgment for the defendant pool manufacturer, emphasizing that the plaintiff—a six-foot-three-inch adult who knew all about the pool's characteristics—had only his own reckless conduct to blame for his injuries.

77. See, e.g., *Smith v. Home Light & Power Co.*, 734 P.2d 1051 (Colo. 1987) (strict liability does not apply to electricity that has not reached the point where it is available for consumer use).

78. See, e.g., *Baughn v. Honda Motor Co.*, 107 Wash. 2d 127, 727 P.2d 655 (1986) (refusing to expand the limits of strict liability to the extent that trail bikes would be outlawed).

79. See, e.g., *First Nat'l Bank of Dwight v. Regent Sports Corp.*, 803 F.2d 1431 (7th Cir. 1986) (rejecting argument that lawn dart, tossed by one child and entering the skull of another, constituted an inherently defective design, court upheld summary judgment for manufacturer because warnings made clear that it was a game of skill for adults, and it was promoted and marketed as such).

80. See, e.g., *Rahmig v. Mosely Mach. Co.*, 226 Neb. 423, 412 N.W.2d 56 (1987) (plaintiff need not prove a feasible alternative design in order to recover for an allegedly defective product design); *Lewis v. Coffing Hoist Div., Duff-Norton Co.*, 515 Pa. 334, 528 A.2d 590 (1987) (high court approved trial court's exclusion of evidence of industry standards relating to the design of the product that allegedly injured the plaintiff).

plaintiff defectiveness standards.⁸¹ And one line of cases that held great promise for the plaintiffs' bar earlier in this decade—air bag auto design cases—appears to have received a fatal blow in a 1988 decision in the U.S. Court of Appeals for the First Circuit.⁸² A recent decision by the U.S. Supreme Court effectively bars states from further developing pro-plaintiff caselaw in another significant class of products liability cases: federal government contractor liability.⁸³

81. Two cases that invoke extreme tests for design are *Azzarello v. Black Bros. Co.*, 480 Pa. 547, 391 A.2d 1020 (1978), and *Barker v. Lull Eng'g Co.*, 20 Cal. 3d 413, 573 P.2d 443, 143 Cal. Rptr. 225 (1978). In *Azzarello*, the court held that for purposes of imposing liability, a "jury may find a defect where the product left the supplier's control lacking *any* element necessary to make it safe for its intended use or possessing *any* feature that renders it unsafe for the intended use." 480 Pa. at 559, 391 A.2d at 1027 (emphasis added). We found no cases from any other jurisdiction that adopted this position. Recently, a Pennsylvania Supreme Court justice, in a dissenting opinion, "spoke out against the madness" of such extreme positions by decrying the "creeping consensus among us judges and lawyers that we are more capable of designing products than engineers. A courtroom is a poor substitute for a design office." *Lewis*, 515 Pa. at 346, 528 A.2d at 596 (Hutchinson, J., dissenting).

Barker proposed a two-pronged test to determine whether or not a defendant can be held liable under a design defect claim:

[I]n design defect cases, a court may properly instruct a jury that a product is defective in design if (1) the plaintiff proves that the product failed to perform as safely as an ordinary consumer would expect when used in an intended or reasonably foreseeable manner, or (2) the plaintiff proves that the product's design proximately caused injury and the defendant fails to prove, in light of the relevant factors, that on balance the benefits of the challenged design outweigh the risk of danger inherent in such design.

20 Cal. 3d at 426–27, 573 P.2d at 452, 143 Cal. Rptr. at 234 (italics omitted).

While several courts have adopted similar two-pronged tests, only Alaska courts have adopted the test with the burden of proof that the product is not defective in light of risk-utility factors shifted to the defendant. *See, e.g., Caterpillar Tractor Co. v. Beck*, 593 P.2d 871 (Alaska 1979). Although California has affirmed *Barker* in *Campbell v. General Motors Corp.*, 32 Cal. 3d 112, 649 P.2d 224, 184 Cal. Rptr. 891 (1982), we would not be surprised to see more pro-defendant California decisions in this area of products law in light of the risk-benefit analysis used by Justice Mosk in a prescription drug design defect case, *Brown v. Superior Court (Abbott Laboratories)*, 44 Cal. 3d 1049, 751 P.2d 470, 245 Cal. Rptr. 412 (1988).

82. *Wood v. General Motors Corp.*, 865 F.2d 395 (1st Cir. 1988). Reviewing decisions by other courts going in both directions, the federal appeals court concluded that federal law preempts state law in this area in a way that bars plaintiff's recovery as a matter of law. Several other courts have since followed suit. *See, e.g., Kelly v. General Motors Corp.*, 705 F. Supp. 303 (W.D. La. 1988); *Kolbeck v. General Motors Corp.*, 702 F. Supp. 532 (E.D. Pa. 1988); *Wickstrom v. Maplewood Toyota, Inc.*, 416 N.W.2d 838 (Minn. Ct. App. 1987), *cert. denied*, 108 S. Ct. 2905 (1988); *Gardner v. Honda Motor Co.*, 145 A.D.2d 41, 536 N.Y.S.2d 303 (1988).

83. *Boyle v. United Technologies Corp.*, 487 U.S. 500 (1988) (contractor providing military equipment to the federal government could not be held liable under state tort law for injury caused by a design defect).

Therefore, on balance, in the last several years courts have been in a holding pattern regarding liability for allegedly defective product designs. They appear to be digesting what has happened over the last decade or so, showing indications of increased awareness of what the real problems are and how to deal with them.⁸⁴ Compared with almost any other period dating back to the early 1970s, the past two or three years on the product design front of the liability war have been peaceful and unexciting.

Failure-to-warn cases constitute the one noteworthy exception to the pro-plaintiff trend. A recent analysis of that area of products liability chronicles the sources of difficulty facing judges trying to manage warnings cases fairly and efficiently.⁸⁵ Yet, even in this area, courts may be becoming more pro-defendant, although the future is far from certain. Perhaps the greatest assistance courts have given plaintiffs bringing failure-to-warn claims over the years is the widespread judicial assumption that additional warnings, in contrast to alternative designs, may be provided by manufacturers at little or no added cost, coupled with a judicial willingness to characterize even relatively remote risks as sufficiently foreseeable to support a jury's verdict that the defendant should have warned more forcefully.⁸⁶

However, a recent decision in the U.S. Court of Appeals for the D.C. Circuit suggests that courts are beginning to rethink the "warnings are free" assumption.⁸⁷ In that case the plaintiff was in-

84. In *Prentis v. Yale Mfg. Co.*, 421 Mich. 670, 365 N.W.2d 176 (1984), the court wrote an opinion embracing a middle-of-the-road, negligence-based approach to design cases. More recently, in *St. Germain v. Husqvarna Corp.*, 544 A.2d 1283 (Me. 1988), the court held that the verdict under a strict liability instruction would have been the same as that under the negligence instruction given.

85. See generally *J. Henderson & A. Twerski, supra* note 15.

86. See, e.g., *Rhodes v. Interstate Battery Sys. of Am.*, 722 F.2d 1517 (11th Cir. 1984) (adequacy of warning reading "Danger—Explosive Gases Keep Sparks, Flame, Cigarettes Away" in case where plaintiff's lighting of match near automobile battery resulted in explosion was a question of fact for jury); *Chausse v. Alcan Ingot & Powders, Prod. Liab. Rep. (CCH) ¶ 11,898* (D. Mass. June 15, 1988) (adequacy of warning which read "Danger! Explosion Hazard Contains Finely Divided Aluminum Flake Powder—avoid dust conditions which can form explosive mixtures. Drums should be grounded when being emptied, use non-sparking handling equipment which is electrically grounded . . ." was a question of fact for jury in case where plaintiff was severely injured by an explosion while he was transferring aluminum powder from one bin to another); *Trivino v. Jamesway Corp.*, 148 A.D.2d 851, 539 N.Y.S.2d 123 (1989) (whether or not a store had a duty to warn about the potential for its cosmetic puffs to catch fire when placed near severe heat was a question for the jury in case where child was severely burned after her costume, covered by the puffs, caught fire over a lighted stove).

87. *Cotton v. Buckeye Gas Prods. Co.*, 840 F.2d 935 (D.C. Cir. 1988).

jured when a fire broke out due to mishandled gas cylinders. The plaintiff claimed that the defendant should have provided more adequate warnings of the risks associated with leaving the valves open on used but not empty cylinders. At trial, after a verdict was returned for the plaintiff, the court granted defendant's motion for judgment notwithstanding the verdict. The court of appeals held that additional warnings were not required because the warnings given were adequate. The employer had sufficient knowledge of the relevant risks, and the plaintiff would not have heeded them anyway. The opinion contains the following observations:

Failure-to-warn cases have the curious property that, when the episode is examined in hindsight, it appears as though addition of warnings keyed to a particular accident would be virtually cost free. What could be simpler than for the manufacturer to add the few simple items noted above [what the plaintiff claimed should have been said in addition to what was said]. The primary cost is, in fact, the increase in time and effort required for the user to grasp the message. The inclusion of each extra item dilutes the punch of every other item. Given short attention spans, items crowd each other out; they get lost in fine print. . . .

. . . If every foreseeable possibility must be covered, "[t]he list of foolish practices warned against would be so long, it would fill a volume." Unlike plaintiff, we must review the record in light of these obvious information costs.⁸⁸

It is difficult to imagine a statement more at odds with judicial attitudes that have prevailed in failure-to-warn litigation over the past several decades. This decision by an influential court, together with others,⁸⁹ suggests that judges are beginning to rethink earlier patterns of decision in failure-to-warn cases.

Viewing the products area as a whole, this tally of important recent developments suggests a clear trend. From cars bursting into flame,⁹⁰ to deformed children,⁹¹ to exploding gas cylinders,⁹² the products field has not run out of plaintiffs with plausible claims that

88. *Id.* at 937-38 (citation omitted) (quoting *Kerr v. Koemm*, 557 F. Supp. 283, 289 n.2 (S.D.N.Y. 1983)).

89. *See, e.g.*, *Thompson v. PetroUnited Terminals, Inc.*, 536 So. 2d 504, 510 (La. Ct. App. 1988) (impractical to require warnings against every possible dangerous use or misuse).

90. *See, e.g.*, *State Farm Fire & Casualty Co. v. Chrysler Corp.*, 37 Ohio St. 3d 1, 523 N.E.2d 489 (1988).

91. *See, e.g.*, *Brock v. Merrell Dow Pharmaceuticals, Inc.*, 874 F.2d 307 (5th Cir.), *modified on rehearing*, 884 F.2d 166 (5th Cir. 1989); *Richardson v. Richardson-Merrell, Inc.*, 857 F.2d 823 (D.C. Cir. 1988), *cert. denied*, 110 S. Ct. 218 (1989).

92. *See Cotton v. Buckeye Gas Prods. Co.*, 840 F.2d 935 (D.C. Cir. 1988).

command sympathy. Courts once favorably inclined to break new ground and to discard doctrine blocking recoveries now are inclined to reflect more cautiously on the implications of their decisions. Courts continue to break new ground and discard doctrine in ways that favor plaintiffs.⁹³ But they are increasingly apt to change the law to preclude liability rather than to promote it.⁹⁴

II. THE QUIET REVOLUTION REFLECTED IN THE BULK OF PUBLISHED OPINIONS

The cases and trends reported in Part I do not prove that a broad-based change in judicial attitudes toward products liability has occurred. They do, however, provide reason to suspect that broad change is occurring. To speak with confidence about such events, one would be required somehow to read and evaluate all (or a large sampling of) products liability decisions for a number of

93. See, e.g., *Rahmig v. Mosley Mach. Co.*, 226 Neb. 423, 412 N.W.2d 56 (1987) (plaintiff in design case need not prove a feasible alternative design in order to recover); *Bowling v. Heil Co.*, 31 Ohio St. 3d 277, 511 N.E.2d 373 (1987) (plaintiff's contributory negligence does not bar or reduce recovery for injury caused by defective design).

94. One of the most interesting recent decisions signalling that a broad-based turn-around in judicial thinking is under way is Judge Sarokin's decision refusing to impose punitive damages on business firms upon whom punitive damages have already been imposed, in other cases, for the same product-related conduct. *Juzwin v. Amtorg Trading Corp.*, 705 F. Supp. 1053 (D.N.J. 1989), *vacated*, 718 F. Supp. 1233 (D.N.J. 1989). That Judge Sarokin fully appreciated that his decision represented a significant turn-around in doctrine is clear from his opinion:

The court reiterates that potential and actual punitive damage awards may continue to serve a vital function in establishing standards of conduct and providing a means to punish and deter those who deviate from those standards. However, it is argued with equal force that the potential for astronomical punitive damage awards may run counter to the public interest by inhibiting research and development of new products, including those aimed at promoting good health and curing disease. Mass tort litigation and serial claims arising out of the same conduct mandate a re-examination of the purpose of such awards and their constitutionality.

Id. at 1064-65. After calling for legislation to address the problem, Judge Sarokin concluded that, until such legislation is in place, he would dismiss plaintiffs' claims for punitive damages whenever defendants show that punitives have already been assessed in a previous action imposing liability for the same conduct. Although another judge in the same district quickly rejected Judge Sarokin's view, *Leonen v. Johns-Manville Corp.*, 717 F. Supp. 272 (D.N.J. 1989), and Judge Sarokin subsequently withdrew his decision because it lacked precedential support, the willingness of a federal judge to consider placing constitutional limits on products liability damages is extraordinary. As an indication that change in judicial attitudes may be underway, Judge Sarokin's initial assessment in *Juzwin* is significant. See also *Browning-Ferris Indus. of Vt. v. Kelco Disposal Co.*, 109 S. Ct. 2909 (1989) (Court rejects challenges to punitive damages based on eighth amendment but leaves open question of due process challenges under the fourteenth amendment).

consecutive years and show that a new, pro-defendant trend has replaced earlier trends. With some qualifications about to be explained, that is what this Part purports to accomplish. After describing the database and how it was constructed, we report the results relevant to our thesis that a quiet revolution in judicial law-making is under way. Since at least the mid-1980s, published opinions have moved towards benefiting defendants over plaintiffs, have increasingly demanded dismissal of plaintiffs' claims as a matter of law, and have tended increasingly to break new legal ground for defendants.

A. *The Published Opinion Database: Methodology*

Approximately three years ago one of the authors decided to write a products liability treatise. To supplement traditional research methods and to help develop an adequate outline, he resolved to read every appellate and federal district court products liability opinion published in recent years and to collect standardized information on each decision. A seven-page data retrieval form⁹⁵ was developed, tested, altered, tested again, and finally put to use.⁹⁶ Although federal district court opinions are included in the survey, appellate opinions dominate.⁹⁷

The items on the data retrieval form include the complete procedural history of each case, the type of product, the type of defect, legal doctrines applied, and policies discussed. Two of the three items filled in exclusively by the author call for judgments regarding whether the decision benefits plaintiffs or defendants,⁹⁸ and the relative significance of the decision as a source of law.⁹⁹ From the data, one can ascertain how many decisions in each year benefited plaintiffs and defendants, how many required victories for defendants as a matter of law, how many broke new ground favoring plaintiffs, and how many broke new ground favoring defendants.

The author limited the database to cases included in a products liability case-reporting service published bi-weekly by Commerce

95. The form is available from the authors.

96. Student researchers assisted the author in completing each form.

97. About 14% of the 2,526 opinions in the published opinion database are federal district court opinions.

98. The form also allows for cases benefiting third parties but such cases play no role in our analysis.

99. Assessing the significance of the decision included judgments whether the case breaks new legal ground, whether it is significant, whether the decision considers and rejects change, and whether the case invokes precedent routinely.

Clearing House (CCH).¹⁰⁰ Working simultaneously backward (through old CCH Reports) and forward (through new and current Reports), the database grew until, at the time of this writing, it contained 2,526 summaries of reported judicial decisions. The database contains about eighty percent of the CCH-reported cases for the years 1983 and 1988 and all, or nearly all, for the years 1984 through 1987.¹⁰¹

In addition to these data, we also have information on products liability opinions published from 1976 to 1979. Approximately ten years ago the author began a prior treatise project and devised a method of collecting and retrieving information from CCH-reported products decisions.¹⁰² Fewer cases were read and tabulated for 1976–1979, but the numbers are large enough to warrant including the data in our overall “benefits whom” analysis.¹⁰³ We also augmented our “benefits whom” data for purposes of this Article. To partially fill the remaining gap between 1979 and 1983, we hired law students to read every case labelled “products liability decision” by Westlaw for 1981 (the midpoint between 1979 and 1983), and to indicate whether in the students’ judgment it made law and, if so, whether it benefited plaintiffs or defendants.¹⁰⁴ We

100. Prod. Liab. Rep. (CCH). Limiting the data in this manner was a matter of convenience. The task of reviewing thousands of reported opinions in tort cases to decide which decisions counted as “products liability decisions” for purposes of building the database was left to a panel of editors at CCH. The author was willing to rely on the publisher’s obvious market incentives to report those cases that would be deemed relevant by lawyers and scholars working in the products liability field, regardless of whether they tended to represent or sympathize with plaintiffs or defendants. Loose leaf copies of the full text of each decision could be kept within easy arm’s reach. Factual summaries, but not full text, are included in the database.

101. Cases added to the database after work on this paper began in May 1989 have not been included in this study. One can roughly estimate the completeness of the CCH Reporter by comparing the number of opinions it reports to the number Westlaw reports. For the years 1984–1987 we collected 1,710 cases, for an average of 428 per year. In 1981, Westlaw identified and reported 358 products liability cases.

102. Because he did not rely on computers or indexing software, the items of information were fewer; but they included the same “benefits whom” question later included in the computerized database.

103. For 1983–1988, we have a total of 2,526 decisions, or an average of 421 per year. For 1976–1979, we have a total of 658 decisions, or an average of 165 per year. Of the 165 per year, an average of 133 per year were evaluated as clearly benefiting plaintiffs or defendants. For the years 1981 and 1983–1988, there should be no appreciable error due to sampling. For 1976–1979, we estimate our sample size to be large enough to assure that a 95% confidence interval is within .06 of the sample mean.

104. We did not tell the students why we wanted the information, nor did we share with them our hypothesis. In effect, we put them in the same position as the author was in when he gathered the data for 1976–1979 and 1983–1988 without any idea that he would later use them empirically.

include their data in the "benefits whom" portion of our published opinions analysis. Thus, we have "benefits whom" data, gathered by three somewhat different methodologies, for the period 1976–1988, except for 1980 and 1982.

Obviously, judgments regarding which products decisions are significant and whom they benefit may reflect the biases of the author, the CCH editors, the Westlaw editors, and, for 1981, the student research assistants. To that extent, the conclusions reached in this Part may be viewed as based on a biased sample. Before they are dismissed, however, a few observations are in order. First, and perhaps most important, the author never contemplated using the data for 1976–1979 and 1983–1988 empirically until after they were gathered.¹⁰⁵ Thus, no motive consciously existed for the author to skew his judgments because, at the time he made them, the author envisioned himself as the only audience that would later rely on them. Moreover, the reported cases were not read and evaluated in a sequence that bore any relation to the time sequences of the judicial decisions. Thus, the project did not begin by reading 1983 decisions and moving steadily forward to the present, a procedure that might allow, perhaps subconsciously, a sense of the pro-defendant trend to emerge part way and influence later judgments. As stated earlier, the decisions for all but 1981 were read in two directions at once, beginning in 1986, with much leap-frogging necessitated by the patterns by which the data-gathering was delegated to student assistants.¹⁰⁶

105. The data retrieval project was conceived exclusively as a tool to facilitate the task of collecting, organizing, and later retrieving a significant body of recent caselaw for the purpose of using the decisions in writing the treatise. When the author decided, for example, that a particular decision did or did not "break new ground," he envisioned that he was speaking to a "future self" who would be relying, perhaps years later, on the accuracy and integrity of that judgment to help write the treatise.

106. Indeed, the author experienced the initial intuition that a shift in judicial decision making was underway only when, in the spring of 1989, he helped prepare a supplement for a casebook used in law school products liability courses. Only then, working systematically through the 1987 and 1988 decisions in the database, did any intuitive sense of the "big picture" emerge. See J. HENDERSON & A. TWERSKI, *PRODUCTS LIABILITY: PROBLEMS AND PROCESS* xv (Supp. 1989) ("we have a hunch that the courts have turned decidedly more conservative in the last two years"). Until then, the author had been totally submerged—quite frankly, overwhelmed—in a massive ocean of "little pictures" in connection with the database. As for the data from the opinions published in 1981 and classified as "products liability decisions" by Westlaw, which were gathered by law students, we took every precaution to assure that the students reacted without systematic bias generated by involvement in this project. Even if one were to dismiss, on methodological grounds, our pre-1983 data, it would not undermine the conclusions we have reached in the "benefits whom" portion of our published opinions analysis. The post-1982 trend is quite clear. We rely on pre-1983 data only for our

One final potential difficulty with relying on patterns of litigation outcomes to support hypotheses of legal change deserves mention. Before deducing changes in the law from rising levels of success for one party or the other, one must consider the possibility that the changes in success rates are not the product of shifts in the law. Instead, the changes may result from shifts in the kinds of claims being brought to courts to decide.¹⁰⁷ If one observes, for example, that plaintiffs lose an increasing percentage of cases, one may be tempted to conclude that the law is shifting in the defendants' favor. But that conclusion may be wrong. The law may actually be changing to favor plaintiffs, who are bringing larger numbers of claims than before. As a result, defendants may be settling a larger portion of the sorts of claims that earlier went to trial, and the claims now going to trial may be weaker than before, resulting in a declining success rate for plaintiffs. Taken as a whole, including the increasing numbers of plaintiffs who receive favorable settlements, plaintiffs are doing better. But one looking only at success rates at trial, for example, would see a misleading picture of plaintiffs doing worse. Thus, unless one has access to "all claims" data, including claims settled without trial, one cannot draw strong conclusions from success rates favoring one side or the other.

These considerations threaten the validity of many attempts to establish the existence of legal change by looking at trends in decisional success rates, but they do not seriously undermine our inquiry. In contrast to inquiries into the relative success rates of litigants which determine how often plaintiffs win and then attempt to reach conclusions regarding legal change based on that circumstantial (and, one could argue, inherently ambiguous) evidence, here we examine the legal changes themselves. That is, we do not here inquire into how often one side or the other wins on appeal. Instead, we characterize the type of law created by each decision that creates law clearly favoring one side or the other.¹⁰⁸

Stated differently, we are not asking, "Who won each case?"—a question the answer to which is significantly in the parties' power to control via settlement. Rather, we ask, "If the decision made law, whom did that law favor?" The answer to this question is

"benefits whom" analysis; for our "matter of law" and "breaks new ground" analyses, we rely only on data from 1983–1988 gathered by the author.

107. Priest, *supra* note 8.

108. A strong correlation exists between "who benefits from law created by the decision" and "who wins." But the correlation is far from perfect. See *infra* note 112 and accompanying text.

much less within the parties' power to control. To be sure, the parties may settle in ways that prevent law from being made in any given instance. But the nature of common lawmaking is such that only one case need reach the decision maker to establish precedent favoring one side or the other. Looking solely at outcomes, it is possible (though, we later argue, implausible)¹⁰⁹ that plaintiffs can lose a majority of litigated cases and yet do well when viewed overall.¹¹⁰ But if one's inquiry is directed at the nature of the law being made in the adjudicative process, the same counterintuitive situation cannot exist. If one finds that trends in the law being made by courts increasingly benefit defendants, it becomes difficult to support the conclusion that nevertheless plaintiffs are doing increasingly better over time.¹¹¹

B. *Party Benefiting From Decision*

Our initial inquiry into the published opinion data analyzes who benefited from the decision: products liability plaintiffs or defendants. The two possible responses—"plaintiffs" or "defendants"—are expressed in the plural, not the singular. Thus, the data reflect the likely effects of any decision on plaintiffs and defendants generally, as classes of participants, rather than the effects of the decision on the individual parties in the particular case. Of course,

109. See *infra* text accompanying notes 153–54.

110. For discussion of some of the difficulties that attend measuring plaintiffs' success in litigation, see Eisenberg & Schwab, *The Reality of Constitutional Tort Litigation*, 72 CORNELL L. REV. 641, 676–77 (1987); Schwab & Eisenberg, *supra* note 7, at 726–27; Trubek, Sarat, Felstiner, Kritzer & Grossman, *The Costs of Ordinary Litigation*, 31 UCLA L. REV. 72, 114–15 (1983).

111. Of the three published opinion inquiries we report, the inquiry regarding the rates at which defendants win as a matter of law is the most amenable to explanation on the basis of a shift in the profile of cases being filed. See *infra* notes 124–37 and accompanying text. But it, too, involves an important "how did she win?" component as well as a "who won?" component, and therefore involves at least low profile lawmaking by judges. Even with respect to that inquiry, then, the shifting pattern of filed cases may not be relevant. We are not arguing that the profile of filed disputes cannot shift in this context. To the extent that judicial resolution of claims as a matter of law includes directed verdicts for defendants on the ground that the plaintiffs' proofs have failed, defendants could be expected to some extent to settle claims so that only those in which plaintiffs' proofs are relatively weak are adjudicated, regardless of the standard used to judge relative weakness. So defendants might be doing fairly well at trial in this regard, even though the low profile law regarding sufficiency of proof is increasingly favoring plaintiffs. But even if that hypothesis might explain the maintenance of an equilibrium in the face of increasingly pro-plaintiff, low profile lawmaking by courts, it hardly explains a strong pro-defendant trend. And both the anecdotal study, see *supra* notes 12–94 and accompanying text, and the high profile lawmaking, see *infra* notes 124–37 and accompanying text, render it improbable that the shifting profile of filed disputes fully explains plaintiffs' declining success.

in many cases the group (plaintiffs or defendants) that benefited from the decision will match the winner or loser in the particular case. But that need not be the case.¹¹² If a decision is so dependent on factors unique to it that it creates no law valuable to other litigants, it is not included in the sample. Because we are more interested in the precedential effects of opinions on the path of the law than on their resolution of particular cases, we pursue the group-oriented inquiry rather than the inquiry focused on individual litigants.

Figure 1 presents the results,¹¹³ after eliminating opinions in which the bottom-line benefits are ambiguous. The results are consistent with the hypothesis that courts have increasingly been favoring products liability defendants in recent years. In 1976, defendants as a group benefited in 44 of 86 cases (51.2%) with ascertainable bottom-line benefits. In 1983, roughly the same results recurred, indicating essentially sideways movement from 1976 to 1983.¹¹⁴ By 1988, this figure had risen significantly to 63.4% (180 of 284 cases), representing an increase of 12.2% or 23.8% of the earlier rate. The march during the period 1983–1988 towards increased defendant success over time is unrelenting, with only one year breaking the trend of decreasing plaintiff success.¹¹⁵ Both the

112. For example, the trial court might, over the plaintiff's objection, give a new instruction favoring the defendant that is likely to affect the amount of plaintiff's recovery. The jury returns a plaintiff's verdict, but for a very modest amount. Both sides appeal. The court of appeals decides that the plaintiff's evidence was sufficient to reach the jury, but also that the instruction was proper. Who won the case? The plaintiff. Whom did the decision on appeal benefit? Defendants as a group. The author who collected these data is certain that this sort of decision recurred with some frequency, though attempts to quantify the rates of recurrence have failed.

113. The data plotted in Figure 1 appear in Appendix A, Table A-1.

114. Alternatively, one could regard the pro-defendant trend as dating back to 1979. This depends in part on whether one views the rise from 1979 to 1981 as a return to the 1976 level, thereby treating the declines in 1977, 1978, and 1979 as a short-term fluctuation, or regards 1979 as the low point for defendants.

115. We are aware of the possible influence of the "affirmed" effect on data dominated by appellate cases. In general, the party appealing loses because appellate courts tend to affirm lower courts. Eisenberg & Schwab, *What Shapes Perceptions of the Federal Court System?* 56 U. CHI. L. REV. 501, 517–18 (1989); Wheeler, Cartwright, Kagan & Friedman, *Do the "Haves" Come Out Ahead? Winning and Losing in State Supreme Courts, 1870–1970*, 21 LAW & SOC'Y REV. 403, 406–07 (1987). Given the affirmed effect, a rise in defendants' appellate success rates could be the result of an increase in the number of appeals brought by plaintiffs. However, the pro-defendant trend found here is not a function of the party appealing. In 1983, in cases with clear outcomes in which plaintiffs appealed, defendants prevailed 57% of the time. This rose to about 62% until 1988, when it jumped to 73%. In 1983, in cases with clear outcomes in which defendants appealed, defendants prevailed 37% of the time. This rate sank for two years and then rose to 43% in 1986, and to 48% in 1987, before decreasing

size of the changes and their trend from 1983 to 1988 are unlikely to have happened by chance.¹¹⁶

One limitation of the published opinion data, and therefore of our results, is that our data for 1976–1981 relied on methodology different from that for our post-1981 data.¹¹⁷ Even if we ignore pre-1983 data, however, the post-1981 data show a surprisingly uniform trend. We also are comfortable making the assumptions necessary to regard Figure 1 as evidence of a decade-long trend, even ignoring our published opinion data from 1976–1981. The anecdotal data support the assumption that pre-1983 law was more favorable to plaintiffs than post-1981 law is shown to be.¹¹⁸ Also, the trial court data discussed below, drawn from federal district court decisions dating back to 1979, support the assumption that prior to 1983 plaintiffs were doing relatively better, and defendants relatively worse, than they have done in the last several years.¹¹⁹ Put differently, if detailed study of pre-1983 data was to reveal that plaintiffs were not doing relatively better than in the post-1981 period, that would be even bigger news than the pre-1983 trends reported here.

A further issue concerning the published opinion data is that we have no comparable data for tort cases generally and for all nontort civil cases. Thus, the trend in products liability decisions revealed in Figure 1 may be part of a larger shift in judicial decision making in tort cases generally, or even more generally in all civil cases. To some extent the data discussed in Part III, drawn from federal district courts, shed light upon this little patch of darkness. It is possible to compare products liability trends in the district courts with parallel trends in other tort cases and in nontort civil

to 43% in 1988. The trend is firmer in cases in which plaintiff appealed, but it is not simply a result of more plaintiff appeals leading to defendant victories. The data confirm the affirmed effect. There are significant differences in defendant (and plaintiff) success rates depending on whether plaintiff or defendant appealed.

116. The difference between the 1983 and 1988 benefit rates is significant at the .05 level. The significance of the trend is based on the regression results in Appendix A, Table A-5. The significance level is the probability that a result as extreme as the one observed could have occurred if the null hypothesis were true. The null hypothesis is that there is no difference between the groups being compared with respect to the characteristic studied in the population from which the cases are drawn. See G. SNEDECOR & W. COCHRAN, *STATISTICAL METHODS* 12 (8th ed. 1989). If the observed significance level is small enough, usually less than .05 or .01, the null hypothesis is rejected. We therefore reject the hypothesis that there is no difference in benefit rates for the years 1983 and 1988.

117. See *supra* notes 95–111 and accompanying text.

118. See *infra* notes 130–98 and accompanying text.

119. See Figure 4 *infra* and accompanying text.

Rate of Products Liability Opinions Benefiting Defendants



Missing: 1980, 1982

Figure 1

cases.¹²⁰ The district court data show products liability defendants to be doing relatively better than tort defendants, or civil defendants generally. The same may be true of the published opinion data.

Finally, one explanation of the data that might undermine the Figure 1 trend can be eliminated. The trend in appellate decision making may be driven by the products liability reform statutes recently enacted in many states.¹²¹ Our concern is not with what

120. See Figures 4, 5, & 6 *infra* and accompanying text.

121. See Litan & Winston, *supra* note 4, at 229-33.

might be called indirect effects—for example, if the enactment of such statutes changes judges' attitudes generally, and those attitudinal changes affect their decision making, so be it. Instead, our concern is with direct effects—when a statute requires the reversal of judicial precedent regardless of whether the judges applying the statute agree with that reversal in principle. Because ours is a study of changing trends in judicial rather than legislative decision making, the direct effects of reform statutes should not be taken into account. To eliminate any possibility that direct effects of reform statutes affect the results, we reanalyzed the data for the years 1983–1988,¹²² while culling all decisions that involved special products liability or tort reform statutes. We did not try to second-guess whether the statute actually affected the outcome in any given case. If a decision in any way involved a recent products or tort reform statute, out it came. Eliminating cases involving statutes removed neither the trend nor the significance of the results.¹²³

Taking into account the several other possible sources of the pro-defendant trend, it is difficult to explain the trend by anything other than a decline in judicial receptivity towards products cases. This trend is unlikely to have happened by chance. It is not a function of increased plaintiff appeals. It is not, at least directly, a function of recently enacted statutes. It is unlikely to be a function of the same trend in other areas of law.

C. *Victory as a Matter of Law*

The published opinion data¹²⁴ were next analyzed to determine how many times courts decided products liability claims for one side or the other as a matter of law. Our hypothesis of increasing defendant success predicts judges becoming increasingly willing to resolve products liability claims in favor of defendants as a matter

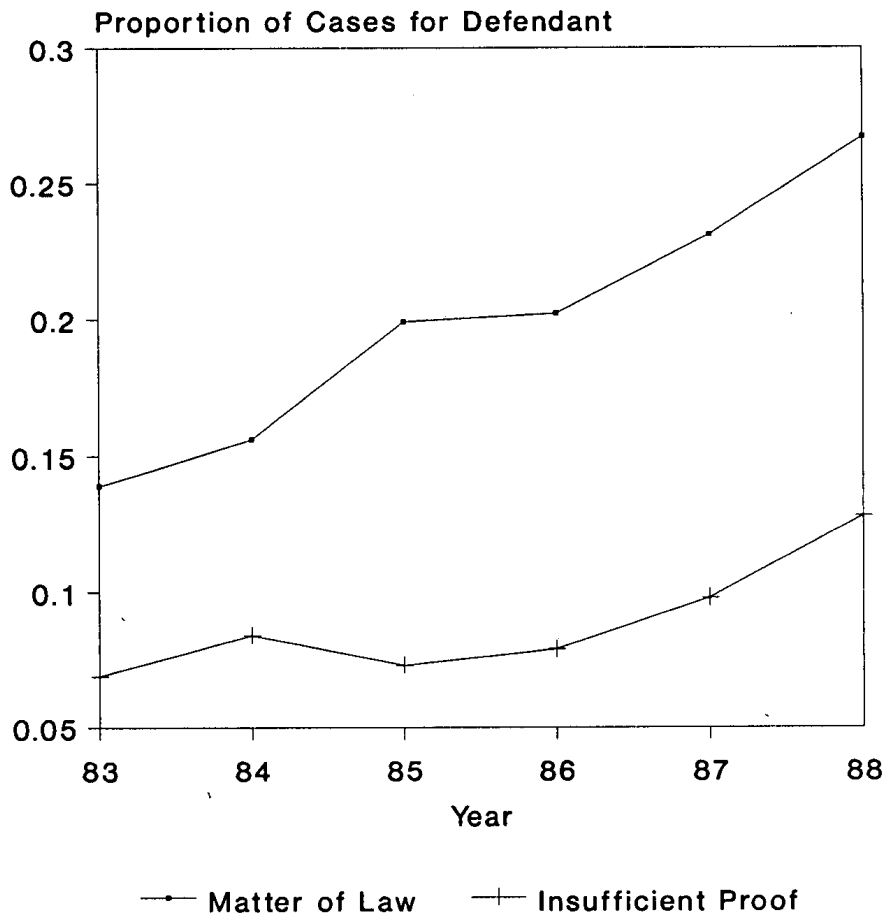
122. Our pre-1983 data do not allow for this adjustment.

123. Another possible source of distortion is the fact that asbestos cases account for almost 9% of the decisions in the database and an even greater portion of district court filings. See *infra* Appendix B. We ran the same "benefits whom" inquiry after culling those cases, together with other major "mass tort" cases, and found that their presence in the database actually biases the results very slightly in favor of plaintiffs. Stated differently, defendants in the nonmass tort decisions in the database actually did better than defendants in the mass tort decisions.

124. Only 1983–1988 data were considered.

of law.¹²⁵ The results of this inquiry are shown in Figure 2 by the line labeled "Matter of Law."¹²⁶

Cases Resolved As A Matter of Law Products Liability



Published Opinions

Figure 2

The Figure 2 results support our hypothesis. Not only, as Figure 1 suggests, did published decisions benefit defendants more frequently over time, they increasingly benefited defendants by

125. Because products claims are so infrequently resolved in plaintiffs' favor as a matter of law (no more than three cases in any year), an increase in the percentage of cases resolved as a matter of law is a pro-defendant trend.

126. The data plotted in Figure 2 appear in Appendix A, Table A-1.

refusing to allow plaintiffs to reach the jury. In 1983, 13.9% (50 of 361) of published products opinions in our database found for defendants as a matter of law. By 1988 this rate had nearly doubled to 26.7% (98 of 367 decisions). This significant trend¹²⁷ never wavered across the six-year period, with increased defendant success as a matter of law in each year. Some of these dismissals as a matter of law, of course, may have been required by new reform statutes noted earlier in connection with the increasing rate at which decisions benefited defendants. We therefore controlled for this possibility and found no significant change in the results.

It is instructive to separate out one subset of products cases decided as a matter of law. A defendant can prevail as a matter of law either by invoking a bright-line, no-duty rule in its favor, such as the old privity requirement in the pre-1960s era;¹²⁸ or by convincing the judge under a vaguer legal standard (for example, the negligence standard) that the plaintiff's proof of breach is inadequate.¹²⁹ From 1983 to 1988, as shown below,¹³⁰ courts increasingly rendered pro-defendant groundbreaking decisions relying on bright-line rules.

A possible explanation of the matter-of-law trend is that these groundbreaking decisions generated formal no-duty rules that were sufficient to lead to more dismissals as a matter of law but that, in cases involving no such new bright-line rules, courts remained as receptive as ever to plaintiffs' offers of proof. Such an explanation would not undermine the finding of increasingly favorable treatment for defendants. But it would suggest that the trend primarily reflects courts applying new bright-line rules rather than increasing hostility to the sufficiency of plaintiffs' evidence. More bright-line rules—resulting from the new groundbreaking decisions—require more dismissals as a matter of law. The increase in pro-defendant rules does not necessarily suggest that, holding constant the state of the formal law, courts increasingly held for defendants on the ground that the plaintiffs' proofs had failed. When judges so determine they make law; but they do so in what might be termed a

127. This difference between the two years is significant beyond the .001 level. See *supra* note 116. The significance of the trend is based on the regression results in Appendix A, Table A-5.

128. See *supra* note 1 and accompanying text.

129. The defendant tests the adequacy of the plaintiff's proof by motions for summary judgment, directed verdict, judgment notwithstanding the verdict and new trial. See generally J. HENDERSON & R. PEARSON, *THE TORTS PROCESS* 6-13 (3d ed. 1988).

130. See Figure 3 *infra*.

“lower profile” manner.¹³¹ Does part of the trend in matter-of-law decisions reflect a trend in the lower profile lawmaking in which courts conclude that products plaintiffs have failed to carry their burdens of proof?

The published opinion data permit us to separate out “high profile” and “low profile” lawmaking in cases resolved for defendants as a matter of law.¹³² By limiting the sample to cases turning on the sufficiency of plaintiffs’ evidence, we can test whether the matter-of-law trend stems solely from high profile shifts in the relative rule-formality of the law, or also reflects the low profile lawmaking we have identified. Even limiting the sample to sufficiency-of-proof cases, a pro-defendant trend emerges. The “Insufficient Proof” line in Figure 2 shows that 6.9% of opinions in 1983 deemed plaintiffs’ proof insufficient. By 1988, this had risen to 12.8%.¹³³ Thus, during the time period in question, courts increasingly favored defendants by resolving a growing percentage of cases in their favor by deeming plaintiffs’ proofs insufficient.

The increasing tendency of opinions to conclude that defendants win as a matter of law has important implications for the trial court data examined in Parts III and IV. First, in searching for trial court trends that might reflect published opinion activity, the matter-of-law trend discovered in the published opinion data suggests that inquiry into trial court data should reveal that products defendants increasingly win at the pretrial motion stage, without cases going to the jury.¹³⁴ Second, the two different bases for dismissal as a matter of law may translate into different predicted effects on subsequent plaintiff behavior. Plaintiffs, in deciding which cases to file, may be expected to adjust to changing legal doctrine and cease filing cases that will lose by virtue of a formal, high profile, bright-line attack on the plaintiffs’ legal theories. Plaintiffs probably can make those adjustments more easily than they can adjust for shifting attitudes towards the sufficiency of evidence under vaguer legal standards. Although the distinction between the two

131. For a helpful discussion of low profile lawmaking and how it differs from high profile lawmaking, see generally Twerski, *Seizing Rules and Standards in Design Defect Litigation: Advancing Directed Verdict Practice in the Law of Torts*, 57 N.Y.U. L. REV. 521, 528-29 (1982).

132. The data retrieval form allows the author to identify which decisions turn on the sufficiency of the plaintiff’s evidence.

133. The difference is significant at the .01 level. See *supra* note 116.

134. It should be observed that “defendant winning by pretrial motion” is a narrower subset of “defendant winning as a matter of law.” Only motions for dismissal and summary judgment are made pretrial. See *supra* note 129.

kinds of dismissals is not always clear,¹³⁵ and the effects overlap,¹³⁶ one suspects that changing attitudes toward evidence may lead to greater uncertainty about the outcome of cases than does changing legal doctrine, and thus might increase the rate at which filed claims reach trial.¹³⁷

D. *Groundbreaking Decisions*

If the path of the law is changing, one should encounter notable decisions pointing the way. We term decisions that chart new paths for either plaintiffs or defendants "groundbreaking."¹³⁸ They are similar to the anecdotal cases noted earlier, though as a group less dramatic. And, unlike the anecdotal data, the groundbreaking cases have been systematically gathered for a purpose not directly connected with the present analysis. Our hypothesis suggests that groundbreaking decisions favoring defendants ought to be increasing with no corresponding increase (or even a decrease) in groundbreaking cases favoring plaintiffs.¹³⁹

For each of the years 1983 through 1988, the study determined how many decisions that broke new ground favored plaintiffs and how many favored defendants. Figure 3¹⁴⁰ plots the percentage of groundbreaking decisions for plaintiffs and defendants in each

135. Formality and informality in legal rules/standards can be arranged in a spectrum. In every case that the defendant wins as a matter of law both the rule/standard and the facts combine to generate that outcome. When the rule/standard reflects mid-range formality, it is difficult to conclude that the dismissal occurred on the law or on the facts. All that can be said is that it depended on both.

136. The "effects" to which we refer relate to shifts in rates of filings and trials. Some changes in the rules may create uncertainty; some changes in judges' attitudes towards sufficiency of proof may make outcomes more certain in some types of cases.

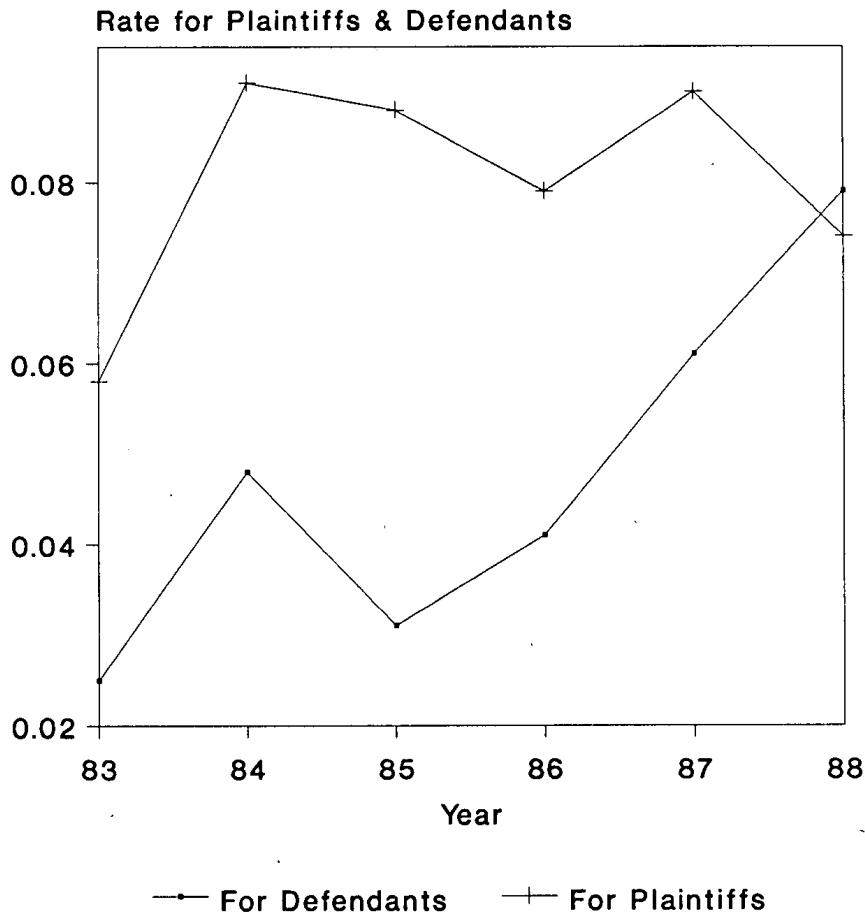
137. Notwithstanding the reality reflected in *supra* notes 135-36 and accompanying text, we believe that pro-defendant changes taking the form of shifts in attitudes toward evidence are more ambiguous than bright-line rule changes and thus more difficult to interpret. Thus, they tend to be less binding on lower courts and less likely to be similarly understood by the parties in litigation.

138. The data retrieval form permitted the author who gathered the published opinion data to characterize decisions as ones that "break new ground." His objective was to tag every decision that, to any unusual degree, changed the law from what it had been previously. The general question, to which "breaks new ground" was one of five possible answers, is: "How decisive is this decision as a source of law in its jurisdiction, ignoring the rank order of the court?"

139. If breakthrough decisions favoring defendants are going up, and breakthrough decisions favoring plaintiffs stay the same, then breakthrough decisions in the aggregate are going up. We see nothing inherently odd about this fact. Simply stated, the law is in a greater overall state of flux.

140. The data upon which Figure 3 is based appear in Appendix A, Table A-1.

Breakthrough Cases Products Liability



Published Opinions

Figure 3

year.¹⁴¹ It shows, for example, that in 1983, 2.5% of the published opinion cases broke new ground for defendants and 5.8% broke new ground for plaintiffs. By 1988 the lines had crossed, with 7.9% breaking new ground for defendants and 7.4% for plaintiffs. Thus, the percentage of groundbreaking decisions for plaintiffs held rela-

141. We have removed from the analysis groundbreaking cases classified as favoring defendants on the basis of their sustaining recently enacted products reform legislation. Such cases reflect less of a change in judicial attitude than a reluctance to strike down legislation.

tively steady over the six-year period, whereas the percentage favoring defendants almost tripled.

Figure 3 contains three results worth exploring. First, as predicted, it shows a substantial and significant increase in the rate at which courts decide breakthrough cases for defendants. The difference between success rates in 1983 and 1988 supports firm rejection of the hypothesis that the difference could happen by chance.¹⁴² And the differences between several pairs of years are highly significant.¹⁴³

Second, Figure 3 does not show a decreasing trend of breakthrough cases for plaintiffs; it shows no significant trend at all. For example, in no two years (consecutive or not) does the rate of decisions favoring plaintiffs differ significantly. Moreover, the two years most separate in time (1983 and 1988) show no statistically significant difference.¹⁴⁴ Unlike the trend for defendants, one cannot reject the hypothesis that the observed distribution of cases favoring plaintiffs could happen by chance. We thus have an increase in breakthrough cases for defendants with no corresponding increase for plaintiffs.¹⁴⁵

The third interesting result in Figure 3 is that in each year except 1988 the absolute number of groundbreaking decisions favoring plaintiffs is greater than the number favoring defendants. How can this persistence of a pro-plaintiff bias be explained in the face of the generally pro-defendant trends we observe? We hypothesize two underlying reasons.¹⁴⁶

First, something like inertia may be at work. There may necessarily be a time lag between the beginning of a trend favoring de-

142. The difference between the two years is significant at the .001 level. *See supra* note 116. The significance of the trend appears in the regression results in Appendix A, Table A-5.

143. The higher number of plaintiff appeals does not explain the effect. Breakthrough cases favored plaintiffs more than defendants to roughly the same extent regardless of which party appealed.

144. For the two years that differ most, the difference is significant at the .10 level but not at the .05 level. *See supra* note 116. Given the possible number of paired years, it is not surprising to find at least one pair for which the difference is nearly statistically significant.

145. *See infra* note 147.

146. Another possible consideration is that we may be expecting too much of the breakthrough case data. The absolute number of groundbreaking decisions in any year tends to be small. For plaintiffs the number ranges from a low of 21 out of 361 cases (5.8%) in 1983 to a high of 42 out of 477 cases (8.8%) in 1985. For defendants the number of breakthrough decisions ranges from 9 of 361 (2.5%) in 1983 to 29 of 367 (7.9%) in 1988. Given the low numbers, the percentage differences across years should not necessarily be taken as evidence of change.

defendants and the time at which the absolute number of groundbreaking cases favoring defendants outnumbers those favoring plaintiffs. Eventually, the equilibrium maintained in any period of steady (as opposed to rapid and transitional) growth or shrinkage in the liability system will produce breakthrough opinions that, on balance, substantially favor the parties (plaintiffs or defendants) in whose direction the steady trend is headed. We suspect the trend shifted toward defendants somewhere around 1983. Thus, it took approximately five years for the absolute number of breakthrough cases favoring defendants to exceed those favoring plaintiffs.

The second reason for the strong plaintiff showing in breakthrough opinions is not directly related to our legal change hypothesis. In the modern era, across many fields of common lawmaking, including torts and products liability, courts find it marginally easier to replace formal, bright-line rules with informal, vague standards than to replace standards with rules.¹⁴⁷ In this era, bright-

147. For a description (and criticism on process grounds) of these trends in tort law, see generally Henderson, *Expanding the Negligence Concept: Retreat from the Rule of Law*, 51 IND. L.J. 467 (1976). For a parallel description and discussion in contract law, see generally G. GILMORE, *THE DEATH OF CONTRACT* (1974). The statement in the text purports to describe a bias favoring vagueness that exists independently of which side tends to benefit from vagueness in standards of decision. The bias reflects a widely shared distrust of legal formality in our society that makes change away from formality less costly to achieve. See *infra* note 150. However, because vagueness tends to benefit plaintiffs, see *infra* note 148 and accompanying text, one could argue that the increasing vagueness in tort law is more properly viewed not as an unavoidable tendency of judicial lawmaking but rather as the product of a conscious judicial effort to help the "have not" victims in their struggle against the "haves" corporate defendants. On that view, tort law has gotten vaguer not because it just happened that way but because that is the best way to help plaintiffs as a group. Even if this position is plausible in the context of tort/products law, where plaintiffs almost always are "have nots," and defendants are "haves," it does not explain the same phenomenon in contract law, where such correlations do not hold. The most feasible explanation in the contracts setting (and thus to some extent in the torts setting) is that the trend toward vagueness reflects not a pro-plaintiff bias but the underlying realities of the legal culture as we have described them.

Lawrence Friedman provides several descriptions of this process in his book, *THE LEGAL SYSTEM: A SOCIAL SCIENCE PERSPECTIVE* (1975). Starting with a formal "gatekeeper" rule, subsequent decisions chip away and create exceptions until it becomes necessary to replace the complex "rule riddled with exceptions" with a new, more workable set of guides to decision. *Id.* at 307. If the new set is enacted legislatively, it may be quite formal though different substantively from the old set. *Id.* at 305-07. But when the new set of guides to decision are imposed judicially, they most often take the form of the underlying (and necessarily open-endedly vague) rationale supporting the complex "rule subject to exceptions" about to be replaced. Friedman relies on the famous products liability decision in *MacPherson v. Buick Motor Co.*, 217 N.Y. 382, 111 N.E. 1050 (1916), as an example. In that decision Justice Cardozo replaced a relatively formal set of rules with the open-ended foreseeability principle from negligence law. In doing so, he purported not to be changing the law, but clarifying it. Friedman observes: "In brief, courts as a rule move cautiously, in short steps"

line rules are more comfortably formulated in legislatures than in courts. Once a court replaces a rule with a standard, it is more difficult to move back to a rule even if, on the substantive merits, such a return seems called for. Something of a "ratchet effect" is in place, moving the common law, incrementally over time, in the direction of vagueness and unspecificity. If, as seems likely, vagueness in tort liability standards tends to favor plaintiffs,¹⁴⁸ the marginal shift away from rule specificity tends to favor plaintiffs.

We should be careful not to make too much of this point. Judges can, and do, move the common law toward bright-line rules of decision;¹⁴⁹ they can and do move the law to favor one side or the other quite self-consciously, in response to substantive considerations that cut across any built-in bias against rule formalism. We are not claiming that the pro-plaintiff trends in the 1960s and 1970s were solely or even predominantly driven by the current we are now describing. Judges during that period self-consciously moved the law to favor products plaintiffs.¹⁵⁰ The bias in favor of informality may have aided and abetted courts in the same manner as a strong tailwind aids a distance runner. But much of the pro-plaintiff movement was undoubtedly driven by forces other than antiformalism bias.

It follows that even a strong turn of the self-conscious decisional tide in products defendants' favor might require time to over-

When the court moves too fast, it becomes a hero to some; but it also runs the risk of resentment, controversy, loss of legitimacy—at least so judges think." *Id.* at 254.

148. Vagueness favors the plaintiff not invariably but in general, over the run of instances. Once it is clear that a claim will reach the trier of fact, the claim gains substantial value and is likely to be settled. Vague standards tend to help plaintiffs reach juries. It follows that the antiformality bias, as a general proposition, helps plaintiffs. *See generally* Kennedy, *Form and Substance in Private Law Adjudication*, 89 HARV. L. REV. 1685, 1717–22 (1976).

149. The following groups of decisions cited in the anecdotal study support the proposition that courts in the mid- to late 1980s, in turning pro-defendant in their orientation, have imposed bright-line, no-duty rules: the refusals to impose strict liability on broad categories of product designs, *see supra* notes 73–79; the refusals to impose liability in the air bag cases, *see supra* notes 82–86; and the refusals to impose liability on so-called federal government contractors, *see supra* note 83.

150. We should at least recognize the possibility, however, that high profile legal change is driven not so much by the attitudes of judges as by the choices made by parties to litigate (including taking appeals) the validity of decisions that are allocatively inefficient. *See generally* Goodman, *An Economic Theory of the Evolution of Common Law*, 7 J. LEGAL STUD. 393 (1978); Priest, *The Common Law Process and the Selection of Efficient Rules*, 6 J. LEGAL STUD. 65 (1977); Rubin, *Why Is the Common Law Efficient?*, 6 J. LEGAL STUD. 51 (1977). On this view, the common law works itself toward efficiency by exerting greater pressures for change on inefficient, rather than on efficient, liability standards.

come the deeper, less self-conscious currents favoring informality and vagueness in this special class of cases. The tailwind favoring plaintiffs becomes a headwind when the direction of change turns to favor defendants. On this view of the common law process of decision making, the surprising thing about Figure 3 may not be that plaintiffs enjoyed breakthrough decisions more frequently than did defendants in most years, even after the pro-defendant change occurred, but rather that defendants managed to come out ahead in 1988. Moreover, if our tailwind-headwind hypothesis is correct, the new equilibrium favoring defendants may see defendants favored over plaintiffs with respect to groundbreaking decisions, but by a margin that is smaller than that enjoyed by plaintiffs during the pro-plaintiff era just ending.

III. THE QUIET REVOLUTION IN THE DISTRICT COURTS

Although some federal district court opinions are included in the data used in Part II, appellate opinions dominate the published opinion database.¹⁵¹ A trend in published appellate opinions worthy of the name revolution ought to generate, or be accompanied by, discernable change at the trial court level. Moreover, looking for trial court trends provides a useful check on appellate findings.¹⁵² At the least, the claim of a pro-defendant products revolution becomes less persuasive if not accompanied by declines in products plaintiffs' success rates in trial court litigation or, worse yet, if accompanied by significant improvements in products plaintiffs' trial court performance.

Before describing and examining the trial court data, recall that the analysis of litigation outcomes can be inherently ambiguous.¹⁵³ If one discovers a pro-defendant trend in recent years, it may be that plaintiffs as a whole are actually doing better, not worse. The law may be moving in their direction so significantly that injured victims are bringing extravagantly foolish claims to trial while settling, favorably, the sorts of claims that earlier required trial. What, then, can we hope to learn from examining the trial court data?

151. See *supra* note 97.

152. The published opinion trend might be the result of a faulty heuristic. Perhaps we subconsciously overemphasize pro-defendant opinions in light of our theory. Perhaps the happenstance of the process that leads to cases being appealed and yielding published opinions skews perceptions. The success of a class of cases can look quite different on appeal than at the trial court level. Eisenberg & Schwab, *supra* note 115.

153. See *supra* text accompanying note 107.

On the one hand, if the trial court data show a strong trend favoring products plaintiffs throughout the period in question, our published opinion analyses would be placed in serious, if not fatal, jeopardy.¹⁵⁴ On the other hand, if the trial court data reveal a strong pro-defendant trend beginning and increasing in the 1980s, we shall have sufficient justification to begin to replace our analytical tents with more permanent structures. To be sure, one can always conjure a hypothesis that is theoretically consistent with the notion that the law is maintaining its pro-plaintiff course. But one would be required to postulate that plaintiffs were lured to bring weak claims by demonstrable improvements in the law in their favor. As explained in Part II, however, the published opinion data hardly permit such an assumption. High profile changes favoring defendants might be quietly occurring while litigants think plaintiffs are increasingly being favored, but that is unlikely. It is one thing to say that plaintiffs might be slow to see the trend against them. It is quite another to assume that they would have read the trend as one favoring them. Thus, empirical study of trial court products cases supplies important evidence bearing on the existence of the quiet revolution.

Three tests using trial court data confirm that we are in the midst of a pivotal era in products liability. During the early to mid-1980s the rate at which products plaintiffs obtained judgments substantially declined. The decline was accompanied by, and appears to have stemmed from, an increase in the rate at which products defendants prevailed on pretrial motion. As the published opinion evidence suggests, trial courts have begun applying increasingly stringent legal standards to products claims.

To further test whether the court-made changes in products liability law have affected trial court performance, we explore products filing rates, which we predict would decline in the face of an increasingly discernable trend in the direction of defendants winning on motion. We also invoke a litigation model under which

154. We might still argue that the law is increasingly favoring defendants, and plaintiffs are responding by withholding all but the strongest claims to pursue in court. But making the factual assumptions necessary to support that argument would border on the heroic. The revolution we are describing is, after all, a *quiet* revolution. It is most difficult to believe that even if a significant pro-defendant shift has occurred we would not find some significant period during which plaintiffs would fail to detect the true magnitude of the change, bring the same old set of claims (let alone an increasingly ambitious set, based on prior trends), and suffer unprecedented losses. So if the trial court data reveal that plaintiffs in products trials enjoyed continuing success in the mid-to late 1980s, we would probably pack our tents and steal into the night.

significant changes in law, while they are occurring, increase uncertainty, leading to an increase in the rate at which filed claims reach trial. Both of the trends predicted by our models have, in fact, occurred. The data show a leveling and eventual decline of products filings from 1979–1987, and an increase in the rate at which products liability cases reached trial relative to other cases tried in federal district courts during the same period. Moreover, the judgment, motion, and trial rate trends are not all explainable as part of a general trend applicable to all tort litigation or to all nontort private civil litigation. Thus, to a significant degree, the revolution of which we speak appears to be unique to products liability litigation.¹⁵⁵ Before presenting the empirical findings, it is appropriate to discuss the data.

A. *The Administrative Office Data*

Data gathered by the Administrative Office of the United States Courts enable us to explore how products litigation has fared at the trial court level. When any civil case terminates in federal district court, the court clerk files a form with the Administrative Office containing information about the case.¹⁵⁶ The form includes data regarding the subject matter of the case, the date of termination, the procedural progress of the case, whether it reached trial, whether it was tried before court or jury, and, where judgments are entered, who prevailed, and the amount awarded in damages.¹⁵⁷

Administrative Office data have strengths and weaknesses as measures of trial court products activity. The data are generally considered to be the best source of information on products liability filings,¹⁵⁸ and therefore might be expected to provide useful meas-

155. In particular, the success rate and motion rate trends discussed below do not emerge in another currently controversial area of tort law, medical malpractice litigation.

156. See ADMINISTRATIVE OFFICE OF THE UNITED STATES COURTS, GUIDE TO JUDICIARY POLICIES AND PROCEDURES, Transmittal 64, vol. XI, at II-19-II-28 (March 1, 1985) [hereinafter A.O. GUIDE]. A complete description of Administrative Office data appears in INTER-UNIVERSITY CONSORTIUM FOR POLITICAL AND SOCIAL RESEARCH (FEDERAL JUDICIAL CENTER, PRINCIPAL INVESTIGATOR), FEDERAL COURT CASES: INTEGRATED DATA BASE, 1970–1987, ICPSR 8429 (2d ed. Winter 1989) [hereinafter ICPSR]. A briefer description appears in T. DUNGWORTH, *supra* note 6, at 59–65.

157. A.O. GUIDE, *supra* note 156; ICPSR, *supra* note 156.

158. UNITED STATES GENERAL ACCOUNTING OFFICE, BRIEFING REPORT TO THE CHAIRMAN, SUBCOMMITTEE ON COMMERCE, CONSUMER PROTECTION AND COMPETITIVENESS, COMMITTEE ON ENERGY AND COMMERCE, HOUSE OF REPRESENTATIVES, PRODUCT LIABILITY: EXTENT OF "LITIGATION EXPLOSION" IN FEDERAL COURTS QUESTIONED 16 (January 1988) [hereinafter GAO].

ures of case outcome trends. They provide nationwide data on many cases over a reasonably long period of time. The results do not depend on one or two quirky districts or one or two extraordinary products.¹⁵⁹ Since data exist for all major subject matter areas, one can compare trends in products liability over time with trends in other tort litigation and in other civil litigation.¹⁶⁰ The data also allow checking on success at various procedural stages. In addition, the data were gathered and coded by many different people over several years without any idea that they would be subjected to this analysis. They could not have been gathered or coded in a way which was colored by any preconceived notion about trends in products liability.

The data's weaknesses include lack of more detailed information about each case. They do not show plaintiffs' complete allegations, defendants' defenses, or other particulars of the lawsuits. Since most cases settle, one cannot expect a definitive judgment for plaintiff or defendant to appear in the records for many cases. Evidence also suggests that some cases are misclassified in ways that

159. When extraordinary trends in any year are attributable to one district we exclude the district's data for the affected year. This occurred only twice. In 1985 the Southern District of Ohio reported hundreds of jury trials favoring defendants. This is attributable to a massive combined Bendectin trial. See *In re Bendectin Litig.*, 857 F.2d 290 (6th Cir. 1988), cert. denied sub nom. *Hoffman v. Merrell Dow Pharmaceuticals, Inc.*, 109 S. Ct. 788 (1989). Were this district included it would show an even more substantial decline in plaintiff judgment rates than is reported below and a more substantial increase in trial rates than is reported below. For the distorting effect these trials have on other measurements of the legal system, see Eisenberg, *Litigation Models and Trial Outcomes in Civil Rights and Prisoner Cases*, 77 GEO. L.J. 1567, 1593 n.93 (1989). Removing the Southern District's results also helps assure that none of the trends detected are attributable to this single product. Similarly, we control for asbestos trends by excluding asbestos cases. See *infra* text accompanying notes 170-74; Appendix B. Another product generating many cases, the Dalkon Shield, was found not to have had a major effect on products filing growth from 1976 to 1986 and exclusion of these cases was, therefore, unnecessary. See GAO, *supra* note 158, at 2.

In 1987 the Northern District of Georgia reported hundreds of "other personal injury" actions against Dimambro Northend Associates. These actions were successfully terminated by defendants on pretrial motion, giving the District a defendant success rate on motion of over 70% when the national average is no more than 6%. These are not products cases but they caused an extraordinary increase in the defendants' rate of winning on motion in the "other tort" category we use as a control group. See Figure 6 *infra*. This increase in turn would cause a decrease in the ratio of win rates for defendants' motions reported in Figure 6. Thus, we exclude the 1985 Northern District data from the analysis.

160. See Galanter, *The Life and Times of the Big Six; Or, the Federal Courts Since the Good Old Days*, 1988 WIS. L. REV. 921; Schwab & Eisenberg, *supra* note 7, at 756-58; GAO, *supra* note 158, at 30.

can understate the impact of a particular case category.¹⁶¹ And gaps in the data occur because some outcomes are not reported.¹⁶² But these shortcomings should produce only minor distortions. We have no reason to suspect that they systematically bias results in favor of either plaintiffs or defendants. Nor should any systematic biases exist that might differ significantly in 1987 from what they were in 1979. Field studies generally confirm the trends or relative success rates reported in Administrative Office data.¹⁶³

In addition, although most tort litigation occurs in state courts, our trial court universe is limited to federal courts. Depending on the criteria parties use to select a federal forum, focusing entirely on federal court activity may introduce biases into our sample.¹⁶⁴ Because federal courts apply state law in tort cases, however, one might expect trends in federal court litigation not to deviate significantly from those in state courts. Moreover, compared with tort cases generally, federal court products filings constitute a surprisingly high fraction of all products filings, even though the percentage of products cases filed in federal court varies across states and by product type.¹⁶⁵ The most comprehensive study of products fil-

161. GAO, *supra* note 158, at 45 (discussing possible miscoding of asbestos cases but noting that most asbestos cases were found using the Administrative Office data).

162. A field study of constitutional tort litigation found cases with money recoveries that the Administrative Office data did not reveal. Eisenberg & Schwab, *The Reality of Constitutional Tort Litigation*, 72 CORNELL L. REV. 641, 687 (1987). The General Accounting Office reports that, under the Administrative Office scheme, an original proceeding or a removal from state court denotes the initial filing of a case; a transfer within the federal system or a reopening constitutes a duplicate filing. GAO, *supra* note 158, at 12, 14, 16. Therefore, filing data double counts some cases. This problem did not substantially affect filing rate growth trends though it of course affects absolute measures of filing activity. *Id.* at 20. Double counting probably affects termination data limited to cases reaching judgment and cases in which issue is joined (the categories of terminated cases used in this Article) less than filing data because such filtering criteria usually eliminate one of the two cases subject to double counting. For example, a transferred case will show up in the district of initial origin as having terminated without a definitive judgment for plaintiff or defendant. Only the transferee district can resolve the case on the merits.

163. *E.g.*, Eisenberg & Schwab, *supra* note 162, at 677-80. Ideally, we would also have information on judgment rates and recoveries before 1979 and after 1987. The Administrative Office only started recording which side won in 1979, ICPSR, *supra* note 156, at 15, and we do not have data for post-1987 years. Since the Administrative Office usually reports results for years beginning July 1, the 1979 data include one-half year of data for calendar year 1978.

164. See generally Bumiller, *Choice of Forum in Diversity Cases: Analysis of a Survey and Implications for Reform*, 15 LAW & SOC'Y REV. 749 (1980-81); Schwab & Eisenberg, *supra* note 7, at 777 n.212.

165. GAO, *supra* note 158, at 39. Between 1979 and 1986, for example, 32% of all products liability cases in Connecticut were filed in federal court. *Id.* at 39-40. For 1981, 1983, and 1985 (the only years for which data are available), 23% of all Iowa

ings notes that the “the lowest percentage for product liability cases filed in federal courts is 23 percent” of filings within the state.¹⁶⁶ Clearly, plaintiffs file enough federal products cases to yield meaningful results.

One additional feature of the Administrative Office data must be noted. The data contain four different categories of tort personal injury products liability. The categories are marine, aviation, motor vehicle, and other.¹⁶⁷ The category “other” is by far the largest, accounting for more than eighty percent of federal products personal injury terminations.¹⁶⁸ The results presented below are for the combination of the four products personal injury categories.¹⁶⁹

Asbestos cases present a more challenging problem because the Administrative Office changed its coding scheme in 1984 to include a separate category for asbestos products cases.¹⁷⁰ The new category is appropriate because asbestos filings represent a unique problem and now dwarf other products filings.¹⁷¹ In years in which the asbestos cases are separately stated within the Administrative Office data, 1985–1987,¹⁷² we exclude them from the analysis. In years in which the Administrative Office data do not separately state asbestos results, we rely on existing studies of asbestos cases¹⁷³ to identify

products filings were in federal court. *Id.* In Massachusetts from 1984 to 1986, 66% of product filings were in federal court. *Id.* Tracing filings by products, 67% of Bendectin-related suits were filed in federal courts, about 43% of Dalkon Shield claims filed from 1974 to 1986 were filed in federal courts, and about 45% of asbestos cases were filed in federal courts. *Id.* A 1983 report indicates that just over half of closed asbestos claims were filed in federal rather than state courts. J. KAKALIK, P. EBENER, W. FELSTINER, M. SHANLEY, COSTS OF ASBESTOS LITIGATION 13 (1983).

166. GAO, *supra* note 158, at 40. The report also notes a time trend towards products filings in federal court rather than state court.

167. A.O. GUIDE, *supra* note 156, at II-88 (Exhibit J).

168. The data analyzed here show 9,016 of 52,750 (17.1%) of nonasbestos products case terminations to be outside the category “other.” The “other” category also dominates filings. From 1983 to 1987 it accounted for 83–88% of nonasbestos products filings. See 1987 ANN. REP. OF THE DIRECTOR OF THE ADMIN. OFF. OF THE UNITED STATES COURTS 181 (Table C-2A).

169. We have repeated the analysis limiting the sample to the largest category, “other,” and the results are even more striking than those presented here.

170. GAO, *supra* note 158, at 16.

171. 1988 ANN. REP. OF THE DIRECTOR OF THE ADMIN. OFF. OF THE UNITED STATES COURTS 184 (Table C-2A).

172. Partial data exist for 1984, the year of the coding change, but they plainly are incomplete.

173. *E.g.*, T. WILLGING, TRENDS IN ASBESTOS LITIGATION (1987).

the relevant asbestos figures and adjust the Administrative Office data to remove any asbestos effect.¹⁷⁴

B. *Plaintiffs' Declining Success Rates*

Given the available data regarding the relative success of parties to products liability actions, what should count as evidence of changes in the law unfavorable to plaintiffs? As we have already observed, this question is more complex than may first appear because the parties can be expected to adjust to rule changes in ways that, over time, dampen the effects of such changes on success rates.¹⁷⁵ Because the trend we hypothesize was not fully and instantaneously (or even very quickly) discerned by products plaintiffs or defendants, we would predict that plaintiffs' success rates at the trial court level would decline during the mid-1980s due to the identified decisional trends running against them. Thus, the simplest and truest measure of the validity of our hypothesis is whether plaintiffs encounter declining success in the district courts, at least until plaintiffs fully absorb the new legal standards and forgo filing cases affected by the hostile trend.

Figure 4 plots the overall success rate for plaintiffs in all products liability cases in which judgment was entered for plaintiff or defendant.¹⁷⁶ These include cases resolved by motion, at jury, at court trial, and by settlement.¹⁷⁷ To limit the analysis to cases pursued seriously in court and not quickly settled, we include only cases in which a responsive pleading was filed and some court action occurred.¹⁷⁸ But the results do not depend on this limita-

174. See *infra* Appendix B. We have repeated the analysis without any adjustment for asbestos cases in the years 1979-1984, and the results support the hypotheses offered here even more strongly than the data presented.

175. See *supra* note 107 and accompanying text.

176. The data plotted in Figure 4 are based on Appendix A, Tables A-2-A-4. The "success" rate plotted in Figure 4 is based solely on the percentage of cases in which judgment is entered for plaintiff or defendant. For a measure of success that takes into account the size of plaintiff recoveries, see Figure 5 *infra* and accompanying text. On the ambiguity inherent in defining "success" in litigation, see authorities cited in *supra* note 110.

177. Although it is counter to some notions of what constitutes settlement, the Administrative Office data show judgments for plaintiffs or defendants in many cases that it classifies as settled. See T. Eisenberg, *Testing Litigation Hypotheses* (1989) (unpublished paper).

178. The Administrative Office coding scheme recognizes the following levels of procedural progress: (1) before issue joined; (2) after motion decided but before issue joined; (3) issue joined, no other court action; (4) issue joined, and after judgment of court on motion; (5) issue joined, and after pretrial conference but before trial; (6) during court trial; (7) during jury trial; (8) after court trial; (9) after jury trial; and (10)

tion.¹⁷⁹ The line labeled "Products Rate" in Figure 4 (which uses the figure's left-hand vertical axis) shows the overall judgment rate for plaintiffs for each of the years 1979–1987. It shows, for example, that in 1979 plaintiffs prevailed in 40.5% of products cases showing definitive judgments and that in 1987 plaintiffs prevailed in only 32.5% of such cases. Plaintiffs' success rate declined by 8%, about 20% of the earlier success rate. The Figure suggests a large and significant¹⁸⁰ decline in plaintiff fortunes during the period, with the decline confirming the published opinion finding of increasing defendant success in the 1980's.¹⁸¹ Furthermore, the decline's greatest step down occurs in 1983, just about when the published opinions begin to suggest a clear trend. The plaintiff judgment rate held steady at around 40% to 1983. Beginning in 1983, which corresponds to one view of the beginning of the period of published opinion trends, plaintiffs' judgment rate fell to around 35% from 1983 to 1985 and to around 32% in 1986 and 1987. The decline at the district court level corresponds to the declining fortunes suggested by the published opinions.¹⁸²

Many possible explanations for the decline are available. As we observed earlier,¹⁸³ plaintiffs, emboldened by years of relative success in products litigation, may have begun filing marginal cases. These cases lose more often than before, not because of a shift in legal standard, but because they constitute a weaker class of filings. Similarly, defendants, singled by the 1960s and 1970s expansions in products liability, may have modified their underlying behavior regarding product safety so that there are fewer meritorious products

other. For categories (1) and (2), no answer was filed to a complaint. For category (3) an answer was filed but no court action occurred. A.O. GUIDE, *supra* note 156, at II-21; ICPSR, *supra* note 156, at 13. We include cases in categories (4) through (9). In 1987, the Administrative Office changed its coding scheme for procedural progress in ways that do not affect our analysis. *Id.*

179. If one includes all terminated cases, plaintiff judgment rates declined from 40.9% in 1979 to 33.8% in 1987.

180. The difference in success rates between 1979 and 1987 is significant at the .01 level. *See supra* note 116. The significance of the trend is based on the regression results in Appendix A, Table A-5.

181. We exclude from the judgment-rate analysis cases lacking a definitive judgment for plaintiff or defendant.

182. Rand researchers report that, in cases tried to juries, the proportion of product liability trials resulting in awards for the plaintiff increased in Cook County, Illinois from about 30% in the early 1960s to about 50% by the early 1980s. In San Francisco the proportion decreased from 57% in the early 1960s to 52% in the 1980s. D. HENSLEY, *supra* note 40, at 4; M. SHANLEY & M. PETERSON, COMPARATIVE JUSTICE: CIVIL VERDICTS IN SAN FRANCISCO AND COOK COUNTIES, 1959–1980, 54–55 (1983).

183. *See supra* note 107 and accompanying text.

cases to bring. We have no definitive test by which to prove or disprove these explanations based on the trial court data. Indeed, it is unlikely that the data needed to connect progress in product safety and products liability law exist.¹⁸⁴ Although the growth of products liability undoubtedly has increased corporate safety consciousness,¹⁸⁵ the available studies cast doubt on the notion that safety behavior has changed dramatically in response to burgeoning products liability claims.¹⁸⁶ And the rhetoric of the published opin-

184. G. EADS & P. REUTER, *DESIGNING SAFER PRODUCTS: CORPORATE RESPONSES TO PRODUCT LIABILITY LAW AND REGULATION* v, 2-3 (1983) ("It is not possible to measure the improvement, if any, in the level of safety of consumer goods that has resulted from changes in regulation and law.").

185. *Id.* at vii (product liability is the most significant influence on product safety efforts).

186. Priest analyzes available data on accident rates and concludes that the crude data provide no evidence that the expansion of products litigation has affected the death or injury rate. Priest, *Products Liability Law and the Accident Rate*, in *LIABILITY: PERSPECTIVES AND POLICY* 184, 194 (R. Litan & C. Winston ed. 1988). Priest also notes that "[t]his conclusion corresponds to findings of the small number of careful empirical studies of specific products, each of which shows little accident-reduction effect of either expanded products liability litigation or greater direct regulation of product quality." *Id.* (citing W. VISCUSI, *REGULATING CONSUMER PRODUCT SAFETY* (1984) and Peltzman, *The Effects of Automobile Safety Regulation*, 83 J. POL. ECON. 677 (1975)). The denial of an effect of products liability litigation must be accompanied by noting the widespread belief that possible products liability judgments affect design and production decisions of all manufacturers. *Id.* at 184. *But see* G. EADS & P. REUTER, *supra* note 184, at 107 (all firms studied by Rand "viewed product liability litigation as essentially a random influence, generating no clear signals [about] how to adjust design behavior"). Another study of accident rates, as measured by incidents in hospital emergency rooms, yielded ambiguous results both with respect to the overall power of the model used and with respect to the significance of the shift towards strict liability. J. Speir, Jr., *An Analysis of Products Liability* 112-25 (Ph.D. thesis, 1987).

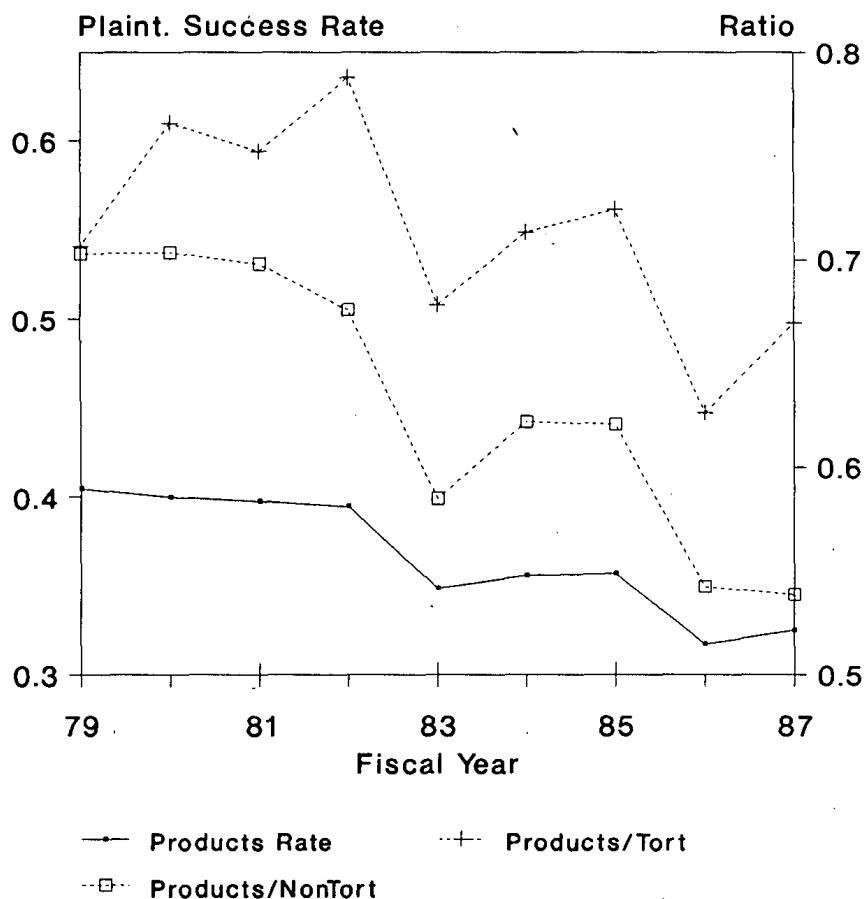
Rand researchers also report that in a study of two firms producing inherently hazardous products:

One firm treated product liability costs as an overhead expense, the other charged the costs to the product but only for pricing purposes. But "the fact that suits arose and judgments were paid out was not considered to impugn the product or anyone connected with its development or manufacture.

D. HENSLER, *supra* note 40, at 10. On the other hand, a study of two firms producing low-hazard products revealed extremely active product-safety programs. But the researchers attributed the concern about safety to the "missionary" zeal of specific corporate officials, rather than to any concrete product liability experience. *Id.* In other firms, concerns about the response to product safety issues were mixed. *Id.* Firms typically took the position that product defects were far more likely to be detected in some way other than by a products liability law suit. G. EADS & P. REUTER, *supra* note 184, at 108.

In another area, there is evidence of changes in products liability law producing an effect. One Ph.D. dissertation studied products liability law for several years before and after the major shift from negligence to strict liability embodied in *Henningsen v. Bloomfield Motors, Inc.*, 32 N.J. 358, 161 A.2d 69 (1960), and *Greenman v. Yuba*

Plaintiff Success Rate Products Liability & Other Cases



Issue joined, cases reaching judgment

Figure 4

ions, measured both qualitatively and quantitatively, strongly suggests that these are not the primary explanations. Thus, the courts seem quite clearly to be saying that products liability has gone far enough; it is time to turn things around.

Power Prods., Inc., 59 Cal. 2d 57, 377 P.2d 897, 27 Cal. Rptr. 697 (1963). H. Arce, *The Impact of Changing Liability Standards on New Product Introduction* (Ph.D. thesis, 1988). The author's results "support the hypothesis that [research and development] expenditures decreased as a result of the shift in the liability standard from negligence to strict liability." *Id.* at 115. The study covers the period 1953-1970.

If one assumes that doctrinal change is not immediately and fully absorbed by the legal system—an assumption we are comfortable making in connection with our hypothesized shifts in products liability doctrine—the success rate data supply additional evidence of a shift in legal environment for products cases.¹⁸⁷ The combination of published opinions self-consciously designed to assist products defendants, accompanied by a decline in plaintiff success rates, is powerful evidence of a changing legal climate.

One important possible explanation for the decline in products success rates does not depend on plaintiffs filing less meritorious cases or on changes in underlying behavior. The success rate of plaintiffs in all civil cases may have declined during the 1980s. It is a common shortcoming of studies of litigation trends to fail to supply a baseline against which to measure trends in the class of cases being observed.¹⁸⁸ Products liability plaintiffs, rather than suffering an unusual fate, may have been swept up in a larger pro-defendant trend. Under this view, if we are in the midst of a revolution, it is not a products liability revolution.

This explanation can be tested using the Administrative Office district court data. Figure 4 (and the figures presented below) contains data on two other classes of cases, designed to serve as controls on the analysis of products liability cases. The two groups of control cases are (1) other (non-products) tort litigation and (2) all nontort private civil litigation.¹⁸⁹ The line labeled “Products/NonTort” in Figure 4 (the line uses the right-hand vertical scale) shows the ratio of success rates for products cases and all private nontort civil litigation terminated in federal district court. The ratio is computed by dividing the products success rate for a given year by the success rate in private nontort cases for that year. The

187. Those who view the new equilibrium that accompanies legal change as precluding the district court data from confirming the existence of the revolution can ignore much of this section. To them, little one can say about the district court data can provide support for the doctrinal shift we assert. Their conclusion about the existence of a legal revolution must be based on the opinion data or on data outside the legal system.

188. For example, the claim of an explosion in civil rights filings looks plausible if one examines only civil rights filings. It is highly questionable if one takes into account federal court filing trends for other cases. See generally Eisenberg & Schwab, *supra* note 162; Galanter, *supra* note 160; Schwab & Eisenberg, *supra* note 7.

189. We exclude from the comparison group of civil litigation all cases in which the United States is a party and all civil rights and prisoner cases. The United States is unusually successful as a litigant, while prisoner and civil rights cases are highly unsuccessful relative to other litigation. See Schwab & Eisenberg, *supra* note 7 at 729–30, 749–55.

negative slope of this line shows a substantial and significant decline in products plaintiffs' success rates as compared with success rates in other litigation.¹⁹⁰

The line labeled "Products/Tort" in Figure 4 shows the ratio of success rates for products cases and non-products tort litigation terminated in federal district court. This ratio is computed by dividing the products success rate for a given year by the success rate in other tort cases for that year. Other tort litigation, like products litigation, suffered a decline in success rates.¹⁹¹ But the ratio line in the figure shows that, since the early 1980s, the products success rate declined faster than the success rate in other tort cases. The decline in plaintiffs' success in products cases cannot be explained as merely part of a more general trend that affects all civil litigation or other tort litigation. Some, but not all, of the products decline can be viewed as part of a similar trend in all of tort litigation.

C. Plaintiffs' Declining Expected Returns

Another measure of a subject area's success is not the raw success rate but the expected recovery (or return) in a class of cases. If plaintiffs' success rates decline but increased awards, in the aggregate, more than compensate for that decline, one might not accept that plaintiffs are faring worse. One can measure plaintiffs' expected recovery by examining all cases in which the Administrative Office data show an amount recovered.¹⁹² Multiplying the success rates for each year in Figure 4 by the median and mean plaintiffs' recoveries in the same year, one can calculate plaintiffs' expected recovery in products and in other classes of cases for each year.

Two factors complicate expected recovery analysis. First, given inflation, expected recoveries should increase even if plaintiffs are faring no better in real dollar terms. Second, even accounting for inflation, monetary awards may be increasing or decreasing in

190. Indeed, there is a small, positive, marginally significant trend in the success rate of private nontort cases. *See infra* Appendix A, Table A-5.

191. *See infra* Appendix A, Table A-4.

192. The figures used here to measure recoveries should not be confused with the actual mean and median recoveries in classes of cases. Administrative Office data recovery amounts appear most frequently for tried cases. Tried cases tend to have higher awards than other cases. J. KAKALIK, P. EBENER, W. FELSTINER, G. HAGGSTROM & M. SHANLEY, VARIATION IN ASBESTOS LITIGATION COMPENSATION AND EXPENSES 19-22 (1984) [hereinafter VARIATION IN ASBESTOS LITIGATION]. The dollar figures used here thus are higher than the mean and median recoveries for all terminated cases. Our assumption is that trends over time in the Administrative Office figures will reflect trends in cases for which the Administrative Office data do not report a dollar award.

all civil litigation. That is, one must account for a possible in-court inflation (or deflation) rate independent of the general declining value of nominal dollars. Both these factors prove to have influenced median and mean recoveries during the period studied. The data show that both mean and median recoveries substantially increased for products, other tort, and all nontort civil litigation.¹⁹³

The expected recovery in products cases compared with other classes of cases is more meaningful. To account for inflation and general in-court trends, we do not analyze the absolute level of products plaintiffs' expected recoveries but rather the ratio of their expected recoveries to those of plaintiffs in other litigation. Figure 5 shows the ratio between products liability expected recoveries and expected recoveries for the two comparison groups of litigation, other tort litigation and nontort civil litigation.¹⁹⁴ The expected recovery for each year is calculated by multiplying the overall success rate for the case category (products, other tort, nontort) by that category's expected monetary award.

In defining the expected monetary award, existing research suggests important differences in trends based on whether one examines the median or mean awards in tort litigation.¹⁹⁵ We include, therefore, two pairs of lines in Figure 5. One pair shows the ratio of expected recoveries based on the median monetary award. The other shows the ratio of expected recoveries based on the mean award. The ratios plotted in Figure 5 show the expected recoveries of the product cases divided by, respectively, the other tort and other civil nontort categories.

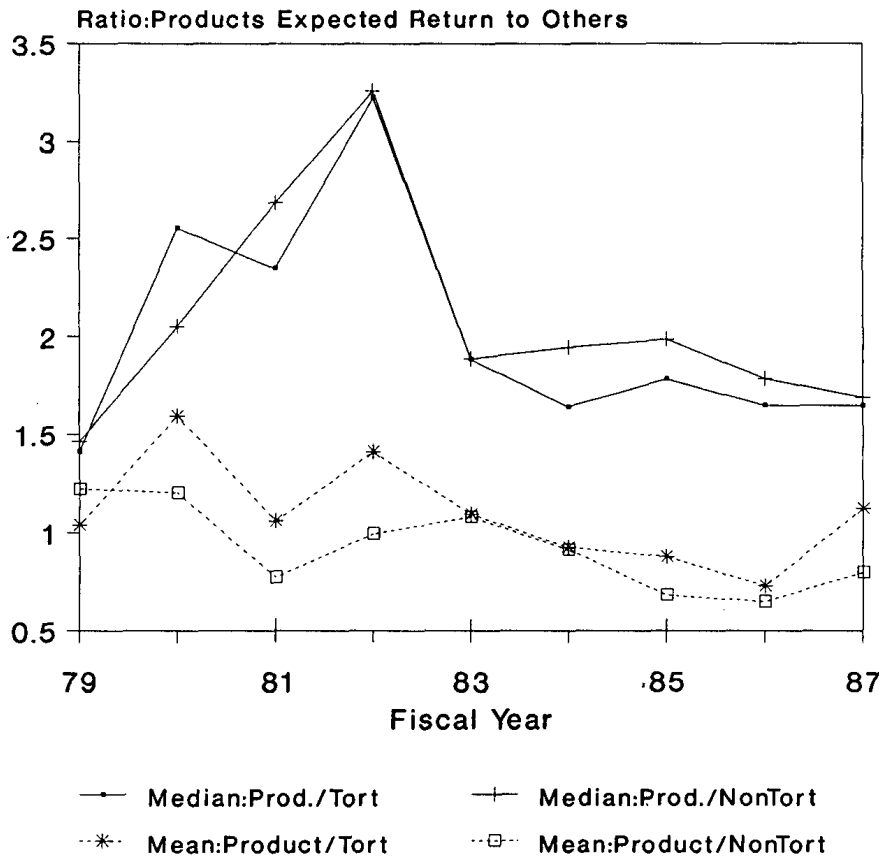
Using median recoveries as a basis for measuring expected returns reveals a substantial decline in products plaintiffs' fortunes beginning at the same time as the published opinion trend. For example, the line labeled "Median:Prod./Tort" shows that in 1982 the ratio between expected returns in products and other tort litigation peaked at 3.23. That is, taking into account the likelihood of winning and the size of the award in cases that allowed awards, products plaintiffs could expect to recover slightly more than three times as much as other tort plaintiffs. By 1987 this ratio had

193. See *infra* Appendix A, Tables A-2-A-4. But note that mean recoveries dropped in all categories in 1987 and median recoveries dropped in products and nontort cases while remaining stable in other tort cases. *Id.*

194. The points plotted in Figure 5 are based on the data in Appendix A, Tables A-2-A-4.

195. D. HENSLER, *supra* note 40, at 4; P. HUBER, *supra* note 7, at 10; Priest, *supra* note 186, at 188, table 7-2.

Expected Return
 Products Liability vs. Other Cases
 Ratio of Expected Returns



Expected Return=(Median or Mean \$ Award)
 x (Plaintiff Success Rate)

Figure 5

dropped by one-half, to 1.65.¹⁹⁶ The line labeled “Median:Prod./Nontort” tells a similar story when comparing products litigation to nontort private litigation. The ratio of expected returns has declined from a 1982 peak of 3.26 to 1.69 in 1987. The declining ra-

196. Note that the product/other-tort ratio always exceeds 1.0. This shows that, even though products plaintiffs prevail less frequently than other tort plaintiffs, their lower success rate is more than compensated for by higher recoveries. See generally Wittman, *Is the Selection of Cases for Trial Biased?*, 14 J. LEGAL STUD. 185, 188 (1985) (observing that a plaintiff who threatens a trial when the probability of winning is very low must be anticipating a very high award).

tios show that the products results cannot be explained as part of a larger trend in other tort or civil nontort litigation.¹⁹⁷ Note, however, that compared to 1979 ratios, the 1987 ratios have not declined. Thus, while products plaintiffs' expected returns relative to those of other plaintiffs declined from the early 1980s to 1987, increased awards, combined with decreasing success rates, leave expected return ratios at about where they were in 1979.

In comparing products litigation to civil nontort litigation, a similar trend appears when one bases expected returns on mean rather than median awards. Mean awards are more volatile than median awards¹⁹⁸ because a few large awards can have more drastic effects on the mean than on the median. Nevertheless, the ratio of mean-based expected returns declined from near 1.0 in 1982 and 1983 to .80 in 1987. Moreover, compared with nontort civil plaintiffs in 1979 and 1980, products plaintiffs went from expected recoveries that were about 20% higher to expected recoveries that were 20% lower. Matters are less clear when one compares mean-based expected returns between products and other tort litigation. Here the ratio of expected returns peaked in 1980 and 1982, suffered substantial declines in 1983, 1984, 1985, and 1986, and strongly rebounded in 1987. There has been no long-lasting decline in mean-based expected returns compared with other tort litigation. Thus, although the bulk of products plaintiffs (including the half who, by definition, recover less than the median award) have suffered compared with other tort plaintiffs, an unspecified number of products plaintiffs have, as of 1987, avoided a decline in expected returns through increased dollar recoveries.

D. *Source of the Decline: Defendants' Pretrial Motion Success*

The revolution suggested by published opinions forecasts a specific source of much of plaintiffs' declining success in the district courts. The revolution reflected in our data is not simply one of juries rebelling against the perceived excesses of the products liability system. The change we hypothesize consists largely of courts articulating new law; it is a revolution primarily of lawmaking, not

197. Putting aside the trend in the ratios, their absolute size is also of interest. Their size, always ranging from about 1.5 to 3.2, indicates that products plaintiffs enjoy a premium in expected returns versus other plaintiffs. Rand researchers, controlling for several variables not controlled for here, found a similar effect in cases tried to juries in Cook County, Illinois and San Francisco County, California. D. HENSLER, *supra* note 40, at 6.

198. See *infra* Appendix A, Tables A-2-A-4.

fact-finding.¹⁹⁹ To the extent the revolution is one of new legal standards, we would expect an increase in the rate at which district courts, applying the new, more pro-defendant legal standards, dispose of products cases before reaching trial. Thus, as suggested by the published opinion data,²⁰⁰ the revolution we detect forecasts not simply a decline in plaintiffs' success rate, but also an increase in defendants' rate of success at the pretrial motion stage.

Figure 6 shows the rate at which defendants prevail on pretrial motion in products cases in which issue is joined.²⁰¹ The "Defendant Success Rate" line (which uses the left-hand vertical scale) shows that in 1979 products defendants prevailed at the motion stage in 4.4% of cases in which issue had been joined. By 1987 this rate increased to 5.5%. From 1979 to 1983 the motion rate was usually around 4.5%. In 1984, in the midst of the published opinion trend, it jumped and has remained in the 5.5% range. A simple model in which one describes the defendant success rate on motion by the time elapsed since 1979 shows the upward trend to be statistically significant.²⁰²

Is this increase in defendant success rate part of a larger trend in tort cases generally towards increased defendant victories at the pretrial motion stage? To study this, the line labeled "Products/Tort" (which uses the right-hand scale) in Figure 6 plots the ratio of defendant win rates for products and tort litigation. It shows that in 1979, products defendants won by pretrial motion .76 times for every time other tort defendants won by pretrial motion. By 1987, this ratio had risen to .98; products defendants were winning by pretrial motion about as often as other tort defendants. The major shift occurred in 1984. Using nontort civil litigation as a reference group yields a similar story. The line labeled "Products/Nontort" in Figure 6 shows that in 1979, products defendants won by pretrial

199. For a discussion of the several ways that courts "make law" when they grant defendants' motions to intervene, see *supra* notes 134-36 and accompanying text.

200. See *supra* notes 124-37 and accompanying text.

201. On the meaning of limiting the sample to cases in which issue is joined, see *supra* note 178. These results do not depend on limiting the sample to contested cases, as described in text at *id.* If one includes all terminations, in 1979, products defendants prevailed by pretrial motion in 3.1% of terminated cases. By 1987, this rate had risen to 4.0%. The points plotted in Figure 6 are based on the data in Appendix A, Tables A-2-A-4.

202. See *infra* Appendix A, Table A-5. The difference between the years 1979 and 1987 is significant at the .07 level. See *supra* note 116. The defendants' increase in pretrial motion success is not accompanied by a major shift in the plaintiff motion success rate. In tort and products litigation, plaintiffs prevail at the motion stage infrequently, usually in less than 1% of cases, with a variation of about .5% over the years.

motion .47 times for every time nontort civil defendants won by pretrial motion, a figure that held roughly through 1983. By 1987 this ratio had risen to .65. Products defendants' increased success at the pretrial motion stage is not simply part of a larger trend in other tort or other civil nontort litigation.

To what extent does the decline in overall plaintiff success rates portrayed in Figure 4 correspond to the increase in defendant motion success rate portrayed in Figure 6? The overall success rate can be viewed as a combination of success rates at various stages of litigation. It is a function of success rates in jury trials and court trials, at settlement, and on pretrial motion. As expected, each of these success rates significantly correlates with the overall success rate.²⁰³ The defendants' success rate at the pretrial motion stage is by far the biggest factor in describing the decline in plaintiffs' overall success rate. This is true despite the fact that tried cases with known judgments substantially outnumber cases in which the defendant wins by pretrial motion.²⁰⁴ The variability in defendants' success rate on motion best explains the variability in their overall success rate. Consistent with the results reached earlier in connection with the published opinion data, in the district courts the quiet revolution has occurred primarily at the motion stage.

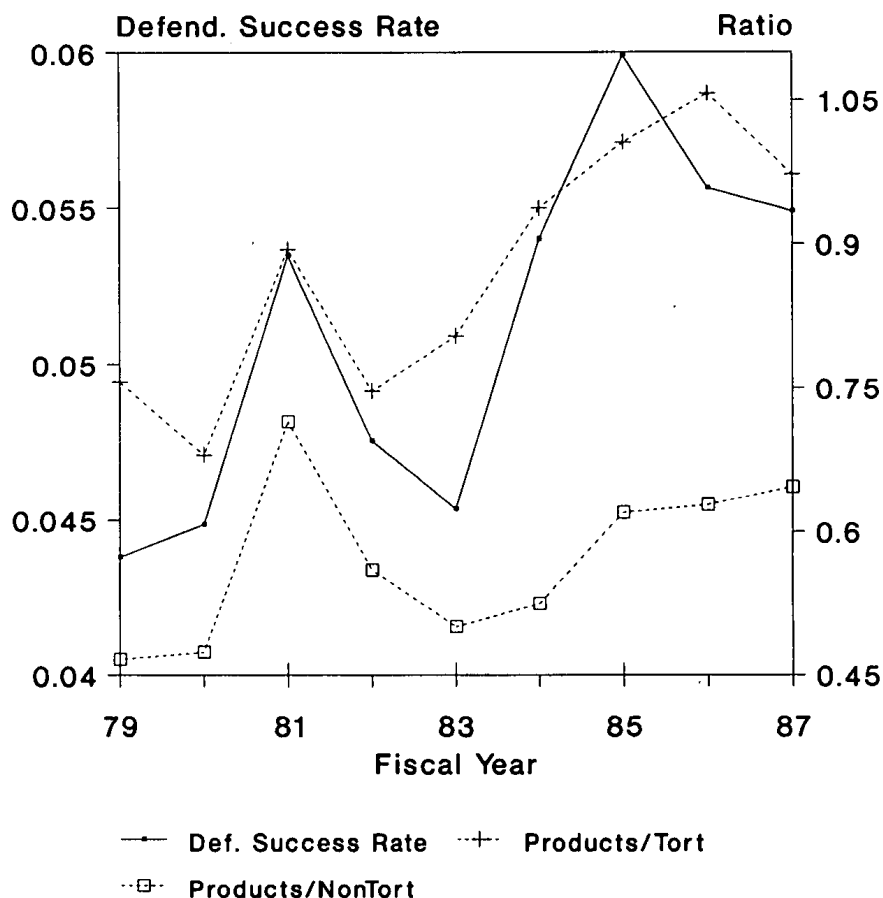
IV. SECONDARY EVIDENCE OF LEGAL CHANGE: FILINGS AND TRIAL RATES

Legal change can affect characteristics other than success rates and expected returns. Changes in legal doctrine can affect the numbers of claims that plaintiffs file and the rates at which the parties decide to take those claims to trial. This Part considers what discerned shifts in filings and trial rates tell us circumstantially about the likelihood that changes in doctrine have occurred. Our hypothesis, that courts have been engaged in a pro-defendant revolution that has made it increasingly difficult for products plaintiffs to reach juries and win judgments, has an easily identifiable effect on the number of products claims leading to court filings. We would predict that, controlling for other variables such as increases in population, product production and consumption, overall litigiousness of our citizenry, and the like, products filings would decline relative to other kinds of civil claims.

203. See *infra* Appendix A, Table A-6 (using quarterly data since 1981).

204. See *infra* Appendix A, Table A-7.

Defendant Success at Motion Stage Products Liability vs. Other Cases



Cases in which issue joined

Figure 6

Two different effects of legal change on the rates at which filed products claims are taken to trial must be considered. To the extent that the quiet products revolution increases the rate at which trial judges resolve cases for defendants on motion, by introducing more bright-line, "gatekeeper" rules favoring defendants, the trial rate should decline. At the same time, however, the pro-defendant revolution introduces uncertainty into litigation, in the form of doubts regarding the stability of traditional approaches to questions of liability. This uncertainty should make it more difficult for parties to agree on the expected outcome of litigation and thus more

difficult to settle. We think the latter effect exerts the more powerful influence.²⁰⁵ The net effect, therefore, will be to increase the rate at which products cases go to trial.

Thus, the legal change we have identified generates two parallel effects: Doctrine at once has become not only less favorable to plaintiffs but also less clear in the areas still open to claims. We expect not only decreased filings but also an increase in the trial rate of products cases that are filed. In other words, fewer cases should be filed, but more of those that are filed should reach trial.

A. *Doctrinal Change Affecting Filings*

The California prescription drug decision refusing to impose liability on drug companies for dangerous prescription drug designs²⁰⁶ illustrates legal change that should affect case filings. This decision forecloses a class of products claims in that state. The Bendectin cases²⁰⁷ and the air bag design cases²⁰⁸ cut off other avenues of products litigation. Rather than merely affecting the rate at which filed cases reach trial, these legal developments should affect the rate at which products cases are filed. Substantial evidence supports the conclusion that the pro-defendant doctrinal changes described in Part I profoundly altered the number of Bendectin-based filings. From 1979 to 1985, Bendectin filings grew substantially in state and federal court, peaking at 212 state court filings and 594 federal court filings in 1985.²⁰⁹ In 1986, the number of state court filings plummeted to forty-four and the number of federal court filings fell to forty.²¹⁰ The filings drop resulted from court cases holding that the alleged causal relationship between Bendectin and birth defects had not been established.²¹¹ Although the Bendectin decisions may have affected trial rates, their most obvious effect, as expected, was on filings.

205. See *infra* note 224. But uncertainty sometimes is viewed as promoting settlement. See Eisenberg, *Commentary on "On the Nature of Bankruptcy": Bankruptcy and Bargaining*, 75 VA. L. REV. 205, 210 (1989); Schuck, *The Role of Judges in Settling Complex Cases: The Agent Orange Example*, 53 U. CHI. L. REV. 337, 346 n.30 (1986).

206. *Brown v. Superior Court (Abbott Laboratories)*, 44 Cal. 3d 1049, 751 P.2d 470, 245 Cal. Rptr. 412 (1988).

207. *E.g.*, *Brock v. Merrell Dow Pharmaceuticals, Inc.*, 874 F.2d 307, *modified on rehearing*, 884 F.2d 166 (5th Cir. 1989); *Richardson v. Richardson-Merrell, Inc.*, 857 F.2d 823 (D.C. Cir. 1988), *cert. denied*, 110 S. Ct. 218 (1989); see *supra* text accompanying note 60.

208. See *supra* notes 82-83 and accompanying text.

209. GAO, *supra* note 158, at 34-35.

210. *Id.*

211. *Id.* at 22; see also cases cited in *supra* note 207.

The effects of doctrinal change on filings will not always be as clear as in the case of Bendectin. The atmosphere of change we detect ought to influence a wide range of products cases but in less dramatic ways. Furthermore, doctrinal change is accompanied by an ever-changing world. There are many more people and more products today than five years ago. The number of possible products-case generating situations steadily increases. Thus, in testing the effects of doctrinal change on general products filings, one ought to take account of filing rates in other civil litigation and the fact that, as more products become available, opportunities for products claims are bound to increase.²¹²

Given the growth in products and population, we would not be surprised to see products filings continue to increase each year through the current decade, although we would expect to see the rate of increase decline in light of the unfavorable legal climate for products plaintiffs. In fact, the data strongly support our hypothesis. As predicted, from 1976 to 1981, products filings increased at a rate well ahead of both the increase in civil filings and the increase in the number of products.²¹³ From 1981 to 1986, however, federal products liability filings grew at about the same rate as civil filings in general and personal expenditures on goods (a measure of the available products).²¹⁴ Since 1986, federal products filings have plummeted. In 1987 federal nonasbestos products filings declined by about nine percent, while total federal filings were down only about six percent.²¹⁵ Federal nonasbestos products filings declined a further seventeen percent in 1988, while total federal filings were

212. For example, the perceived explosion in nonprisoner civil rights filings disappears when one considers growth in other civil filings. Schwab & Eisenberg, *supra* note 7, at 756-58. The growth in prisoner filings becomes less daunting when one takes into account the increased number of prisoners. Eisenberg & Schwab, *supra* note 162, at 666-68. See generally E. TUFTE, *THE VISUAL DISPLAY OF QUANTITATIVE INFORMATION* 66 (1983) (noting that a graph makes its political point of increased government spending by failing to discount for inflation and population growth).

213. GAO, *supra* note 158, at 3.

214. *Id.* These figures exclude three extraordinary sources of products filings growth: asbestos cases, Dalkon Shield cases, and Bendectin cases. The trend of increase in state courts seems more modest, with one report stating, "A trend toward filing [products cases] in federal court was apparent." *Id.* at 32. In Florida state courts in 1986 products claims comprised only 2.3% of all tort claims. Gifford & Nye, *Litigation Trends in Florida: Saga of a Growth State*, 39 U. FLA. L. REV. 831, 849 (1987).

215. 1987 ANN. REP. OF THE DIRECTOR OF THE ADMIN. OF THE UNITED STATES COURTS 181 (Table C-2A). These figures and those which follow for 1988 and 1989 exclude asbestos cases but include Dalkon Shield and Bendectin cases.

down less than one percent.²¹⁶ And in 1989, nonasbestos products filings declined by about five percent while total federal filings shrank by less than three percent.²¹⁷ Since 1986, nonasbestos filings have declined by twenty-six percent while all federal filings have declined by only about eight percent.

This leveling and decline in products filings is consistent with the published opinion trends described in Part II. Although cases establishing new law have turned increasingly against plaintiffs since 1984, it is only relatively recently that the absolute number of breakthrough cases for defendants exceeded the number of breakthrough cases for plaintiffs.²¹⁸ The number of cases breaking new ground for plaintiffs first dropped below the number of cases breaking new ground for defendants in 1988. But the underlying trend was evident before 1988, dating back at least to 1984. The trend of increasing defendant breakthrough cases, accompanied by a higher, though more stable, number of plaintiff breakthrough cases, corresponds well to the observed slowing growth and eventual decline of products filings. Similarly, the number of cases favoring defendants first exceeds the number of cases favoring plaintiffs in 1985. This, too, is consistent with a recent leveling and decline in products filings.

B. *Doctrinal Change Affecting Trial Rates*

To analyze the effect of uncertainty on trial rates, we invoke a litigation model under which the determinants of litigant behavior are solely economic.²¹⁹ Under the model, parties settle cases rather than pursue them whenever the parties perceive that settlement generates a net savings. Given the costs of trial, the parties will settle whenever they agree about the likely outcome of trial. To illustrate, if plaintiff and defendant each believe that plaintiff has a fifty percent chance of recovering \$10,000, there is no reason for them to try the case. Defendant should pay plaintiff \$5,000, adjusted to reflect the savings in litigation costs, and both parties can avoid the costs of litigation. If, however, the plaintiff believes it has a seventy-five percent chance of success and the defendant believes its opponent has a twenty-five percent chance of success, the plaintiff's expected

216. 1988 ANN. REP. OF THE DIRECTOR OF THE ADMIN. OFF. OF THE UNITED STATES COURTS 184 (Table C-2A).

217. 1989 ANN. REP. OF THE DIRECTOR OF THE ADMIN. OFF. OF THE UNITED STATES COURTS 88 (Table C-2).

218. See Figure 3 *supra*.

219. Priest, *supra* note 8, at 193.

recovery is \$7,500 and the defendant's expected loss is \$2,500, even if they agree that \$10,000 is the likely judgment figure in the event of the plaintiff's victory. Unless the parties' estimate of litigation costs exceeds the difference in expected outcomes, the case should proceed to trial. Stated more generally, assuming agreement about the stakes of a dispute, the likelihood of trial is a function of the difference between the parties' prediction about the outcome of litigation.²²⁰ When uncertainty increases, we expect the parties to find it more difficult to agree on expected outcomes, and therefore they are more likely to take cases to trial rather than settle.²²¹

A good example of the type of doctrinal change that increases the level of uncertainty in the decision standard is the car fire case, in which the Ohio Supreme Court refused to allow a manufacturing defect claim to reach the jury.²²² It does not formally and decidedly close doors to claims. It does not seek in high profile, gatekeeper fashion to modify plaintiffs' rights. It "merely constitutes an application of the law to evidence."²²³ Plaintiffs who earlier believed they faced a favorable legal environment could easily treat the Ohio decision as a one-time phenomenon and continue to bring cases. To be sure, the decision would also lead courts to dispose of a marginally greater number of claims on motion, thereby decreasing the number of filed claims that go to trial. But in the group of cases in which the trial court refuses to intervene, the Ohio decision might well affect the parties' ability to agree, before trial, on the prospective outcome of litigation, thereby inhibiting the parties' ability to settle. Thus, a direct and expected consequence of this increased uncertainty would be, even after offsetting the judicial interventions on behalf of defendants, an overall increase in the percentage of claims taken to trial.²²⁴

220. Priest states, "It is now well-established that the greater the difference between the litigants' expectations, the more likely [trial] will be . . ." *Id.* at 197.

221. This theory is more fully developed elsewhere. *E.g.*, Priest, *supra* note 8; Schwab & Eisenberg, *supra* note 7, at 747-48, 756-59.

222. *State Farm Fire & Casualty Co. v. Chrysler Corp.*, 37 Ohio St. 3d 1, 523 N.E.2d 489 (1988); *see supra* notes 48-52 and accompanying text.

223. 37 Ohio St. 3d at 10, 523 N.E.2d at 497.

224. Given that the quiet revolution includes decisions increasing uncertainty, which effect—increased disposition for defendants on motion or increased failure of the parties to settle due to uncertainty—will predominate? Recall that, notwithstanding a significant trend towards judges disposing of cases for defendants by pretrial motion, the percentage of cases disposed of in this manner is relatively small. And the *change* in the rate at which defendants win on motion, though significantly increasing, is of the order of 1%. *See supra* Figure 4; *infra* Appendix A, Table A-2. In contrast, the percentage of filed claims settled before trial is very large, near 80% of all filed cases. Schwab & Eisenberg, *supra* note 7, at 729 n.36. Even a modest increase in uncertainty suggests

A complicating feature is that an increase or decrease in the products trial rate may be attributable to a general increase or decrease in trial rates. Federal court trial rates in nontort cases have, in fact, declined over the last decade.²²⁵ In nontort civil litigation, trial rates dropped from 7.1% of contested cases²²⁶ in 1979 to 4.8% in 1987.²²⁷ To what extent, and in what direction, have products trial rates changed relative to this general decline in trial rates?

Figure 7 plots the trial rate for products cases.²²⁸ The rate in 1987, 9.3%, is lower than in 1979, when it was 10.0%. But the most noticeable feature of the plot is the bump in trial rates in 1981, 1982, and 1983. This may have been a period of increasing uncertainty in the products field, although three years seems too short a time to allow for firm conclusions. A clearer pattern emerges in comparing products trial rates with nontort civil trial rates. Figure 7 also plots (using the right-hand vertical axis) the ratios of the products liability trial rate and the trial rate in (1) other tort litigation and (2) all private nontort civil litigation. The Figure shows that the trial rate in products cases has been about the same as the rate in other tort litigation. The ratio of the trial rates is approximately 1.0 for all years studied. In contrast, the trial rate for products cases has increased substantially in relation to the rate for civil nontort litigation. The ratio was 1.41 in 1979 and 1.94 in 1987. An increasingly higher fraction of products cases reach trial than do civil nontort cases, suggesting a corresponding relative increase in products litigant uncertainty.

that the trial-increasing effects of a lower settlement rate should overshadow the trial-decreasing effects of increased dismissals by motion. Thus, we should see increases in the rates at which products cases reach trial.

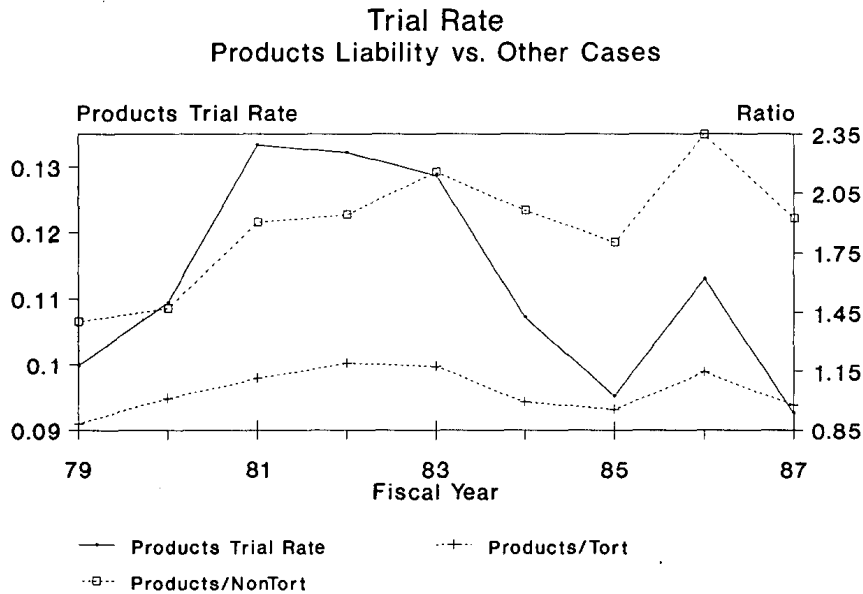
Similarly, the gas cylinder failure-to-warn case, *Cotton v. Buckeye Gas Prod. Co.*, 840 F.2d 935 (D.C. Cir. 1988), introduces a relatively novel consideration to legal calculus—the concept of information costs. The case does not purport to cut off claims; it merely reviews the record “in light of . . . obvious information costs.” *Id.* at 937–38. Even after accounting for an increase in judicial interventions, the accompanying increase in the possible range of expected outcomes ought to lead, at least in the short run, to a larger percentage of cases being taken to trial rather than terminating through judicial intervention or settlement. Priest distinguishes between levels of permanent uncertainty and levels of transitory uncertainty. *See* Priest, *supra* note 8. It may be too soon to have arrived at any permanent level of uncertainty accompanying the products doctrinal changes discussed above.

225. *See infra* Appendix A, Table A-3; Galanter, *supra* note 160, at 947–50.

226. On the meaning of the limitation to contested cases, see *supra* note 178. The decline in trial rates applies to all terminated cases as well. Galanter, *supra* note 160, at 947–50.

227. *See infra* Appendix A, Table A-3.

228. The points plotted in Figure 7 are based on data in Appendix A, Tables A-2–A-4.



All terminations

Figure 7

CONCLUSION

American courts deciding products liability cases are in the midst of a significant revolution. After decades of extending the boundaries of liability, both appellate and trial judges are reaching decisions favoring products defendants in unprecedented numbers. Although it is difficult to pinpoint exactly when this legal change began, we trace its origins to the early to mid-1980s. Clearly, it has been in full swing for the past several years. Unlike most revolutions, legal and nonlegal, this one has been amazingly quiet. Other writers have observed that some recent claims of "crisis" in products and other areas of tort are exaggerated.²²⁹ And pro-defendant state legislative change has not gone unnoticed.²³⁰ But no one has paid systematic attention to patterns of all products decisions by courts. This Article discerns, and empirically establishes, that major changes in judicial decision making are occurring.

229. See, e.g., Galanter, *supra* note 160; Galanter, *Reading the Landscape of Disputes: What We Know and Don't Know (and Think We Know) about Our Allegedly Contentious and Litigious Society*, 31 UCLA L. REV. 4 (1983); Galanter, *The Day After the Litigation Explosion*, 46 MD. L. REV. 3 (1986).

230. E.g., Litan & Winston, *supra* note 4 at 229, 230-33.

Two sources substantiate the legal change hypothesis. Viewed anecdotally and systematically, the published opinion data unambiguously point to significant shifts in direction. The federal district court data, though more ambiguous standing alone, support the conclusion that change is taking place. The shift in products decisions is driven by shifting trends in judicial decision making, not by the products liability and tort reform statutes enacted in many states in the 1980s. The change is not simply part of broader pro-defendant trends in tort cases or in civil litigation generally. Furthermore, the change reflects trends in products generally, not in one or two large (and thus potentially distorting) subsets of products litigation, such as asbestos cases.

Despite our efforts to control for influential variables, important items remain to be explored. The breadth of the data on which we rely, while assuring that the detected trends are not isolated local phenomena, can mask notable subthemes. For example, the published opinion data reveal an important difference between state and federal courts. Plaintiffs' declining success in cases leading to published opinions is attributable to a decline at the state, but not the federal, level.²³¹ Federal published opinions, which include trial court opinions but are dominated by appellate opinions, have not increasingly favored defendants; only state court opinions have. At the same time, federal trial court activity, as reflected in the Administrative Office data, has paralleled state court activity by increasingly favoring defendants. Federal district courts thus seem to be faithfully applying state products law in the majority of cases, but it is something of a mystery why federal appellate opinions reveal no similar trend. Perhaps their relatively greater remoteness from state law or trends in popular attitudes causes federal judges to be less sensitive to shifts at the state level. Or perhaps federal judges are appointed based on criteria different enough from state court judges to account for the disparate responses in the published opinion data. Another issue for further inquiry is whether regional differences are detectable. For example, the spate of tort and products reform statutes may have created or may reflect local legal environ-

231. In our published opinion study, defendants in federal court have benefited overall in about 60% of the cases throughout the years. Neither federal district court opinions nor federal courts of appeal opinions show a significant trend from 1983 to 1988. This suggests not only that the quiet revolution has been a state-court and federal district court phenomenon but also that the observer of federal district court published opinions would see a products liability system very different from that seen by the observer of all federal district court case terminations. *See generally* Eisenberg & Schwab, *supra* note 115.

ments that differ widely. Distinguishing among regions based on their statutory environment is a possible fruitful area of study.²³²

A final issue worth further inquiry is the very quietness of the revolution. In some areas of law, observers of opinions and trial court activity see different realities and one can understand why one view of reality might dominate.²³³ But the observed trends in products liability are not ambiguous. Both opinions and trial court activity tell the same story. How can knowledgeable observers have not only failed to detect a near-decade old trend, but also believed that judge-made products law was heading in the opposite direction?²³⁴

Accepting the existence of the quiet revolution, what should we make of it? One question is whether the change is for the better. Liability law has tried to serve as a system of social insurance for the past few decades, a function many believe it is poorly equipped to perform.²³⁵ Beginning in the early 1980s, state legislatures attempted to correct what they saw to be overextensions of tort and products law. But even well-drafted and well-intended statutes cannot succeed without enlisting the willing support of the judiciary, and that support cannot be legislated. Those questioning the transformation of tort and products law into social insurance systems should view the change we describe as not only improving products liability law, but also as suggesting that the statutory reforms are likely to be given a fair chance in courts.

To others, whether they approve or disapprove, the quiet revolution's trend is an inevitable reaction to rapid development in a relatively young area of law. Common sense suggests that products liability's early growth rate could not be sustained indefinitely. Changes in time and temperament realistically left room for major

232. Cf. Eisenberg, *supra* note 159, at 1584-94 (regional analysis of civil rights and prisoner cases).

233. Eisenberg & Schwab, *supra* note 115.

234. One might also ask whether the change in products liability is reflected in insurance rates. See generally Abraham, *Making Sense of the Insurance Liability Crisis*, 48 OHIO ST. L.J. 399 (1987); Epstein, *Products Liability as an Insurance Market*, 14 J. LEGAL STUD. 645 (1985); Priest, *The Current Insurance Crisis and Modern Tort Law*, 96 YALE L.J. 1521 (1987); Weinrib, *The Insurance Justification and Private Law*, 14 J. LEGAL STUD. 681 (1985). One empirical study finds that insurers' underwriting risk "is greater in states that tend towards absolute liability." D. Barker, *An Empirical Analysis of the Relationship Between the Doctrine of Strict Products Liability and the Provision of Insurance* 111 (Ph.D. thesis, 1988).

235. See generally Danzon, *Tort Reform and the Role of Government in Private Insurance Markets*, 13 J. LEGAL STUD. 517 (1984); Epstein, *supra* note 234; Priest, *supra* note 234.

change in only one direction, especially since the early, pro-plaintiff developments put powerful social, industrial, and financial interests on the wrong side of innovative lawsuits. These interests have mounted massive publicity campaigns²³⁶ as well as enormously expensive federal and state legislative lobbying efforts.²³⁷ On this view, at least in the long run, the "haves" will come out ahead.²³⁸

A second obvious question is whether reform statutes are needed any longer now that judicial change has occurred. One's answer here probably depends on one's position regarding the underlying question whether reform legislation makes sense in any event. Opponents of reform legislation will use this Article as evidence that no further legislative action is necessary. Indeed, opponents of change may rely on our results to support repeal of reform statutes already enacted into law. Proponents will argue that courts at last are headed in the right direction and should be given even more legislative encouragement.

Facile use of our analysis in either fashion would, to borrow a bit of products terminology, constitute "misuse" of our data. The general pro-defendant trend does not mean that courts in every jurisdiction have solved, or will in the foreseeable future solve, all of the problems some perceive to have been caused by earlier expansionary trends. As observed in our anecdotal reports of recent decisions, courts in some states and in some doctrinal areas continue much as they have for more than twenty years, pushing outward the boundaries of liability.²³⁹ Thus, in assessing whether statutory reform is required notwithstanding the change we detect, one must examine the relevant decisional law in the particular jurisdiction. If that law is judged to be inappropriate, our analysis provides no guarantee that courts in the jurisdiction will ever, on their own, improve the situation. Moreover, even if the trend we identify could somehow be expected, over time, to correct most of the per-

236. *E.g.*, American International Group, *The Liability Lottery: We All Lose*, Wall St. J., June 15, 1989, at A-4 (two page advertisement claiming that excessive products liability lawsuits impose a hidden tax, reduce U.S. international competitiveness, and discourage product development, and trumpeting the virtues of P. Huber's book *LIABILITY: THE LEGAL REVOLUTION AND ITS CONSEQUENCES*, *supra* note 7).

237. It is not accidental that Congress and many state legislatures considered products liability reform. *See supra* notes 2, 4 & 5 and accompanying text. These are not the kinds of statutes that legislators generate without prodding.

238. Galanter, *Why the "Haves" Come Out Ahead: Speculations on the Limits of Legal Change*, 9 *LAW & SOC'Y REV.* 95, 100 (1974); Wheeler, Cartwright, Kagan & Friedman, *Do the "Haves" Come Out Ahead? Winning and Losing in State Supreme Courts, 1870-1970*, 21 *LAW & SOC'Y REV.* 403 (1987).

239. *See supra* note 93 and accompanying text.

ceived earlier mistakes, it could take years for those corrections to be made.

Nor do our findings mean that legislatures should now necessarily feel freer to maintain or adopt reform statutes encouraging the pro-defendant trend. In states where judicial decisions expanded the products field, and where recent developments suggest that courts are rethinking those expansions, products law may best be left to stabilize, or shrink, through the same process. And some statutes have imposed ill-conceived and draconian changes.²⁴⁰ Such statutes should be re-examined regardless of judicial trends. Each jurisdiction must assess the status of its products law in light of its judicial trends and existing statutes.

It follows that, although our analysis identifies a major shift in judicial lawmaking, it can only partly inform the decisions whether a particular statutory proposal should be enacted and whether existing statutes should be modified or repealed. In jurisdictions concerned with earlier pro-plaintiff judicial trends, our analysis offers hope that sensible statutory reform will yield results. Never in recent memory has the judicial climate in products law been more receptive to statutory reform. A legislature might choose to initiate such change, engaging in what hopefully would become a cooperative effort between legislature and courts. At the very least our findings should make legislators considering change more inclined to observe the reality of the legal products climate in which they operate. Some will be surprised by what they see.

240. *See, e.g.*, N.C. GEN. STAT. §§ 1-50(6) (1983) (six year statute of repose: all products claims, including those where injury occurs beyond the time period, absolutely barred six years after product is distributed in commerce).

APPENDIX A
TABLE A-1
PUBLISHED OPINIONS, PRODUCTS LIABILITY CASES

Year	Party Benefiting		Defendant Succeeds as Matter of Law or Proof			Cases Breaking New Ground			
	N	Benefits Plaintiff	Rate for Defendant ^a	Defend. Wins Matter of Law	Rate for Insuff. Proof	Break for Plaintiff	Break Ground for Defendant ^b	New Ground Plaintiff Rate	Defend. Rate
1976	86	42	.512	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1977	188	93	.505	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1978	159	84	.472	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1979	97	54	.443	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1980	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1981	328	162	.506	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1982	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1983	361	105	.516	50	.139	25	.069	21	.058
1984	441	169	.474	69	.156	37	.084	40	.091
1985	477	130	.549	95	.199	35	.073	42	.088
1986	416	124	.562	84	.202	33	.079	33	.079
1987	376	107	.575	87	.231	37	.098	34	.090
1988	367	104	.634	98	.267	47	.128	27	.074

Notes:

a. This rate is based on total number of cases clearly benefiting a party. It is calculated by dividing the number of cases benefiting plaintiffs or defendants, respectively, by the sum of party benefiting columns. For 1976-1982, the total number of cases reported (N) includes only those with outcomes clearly favoring plaintiffs or defendants.

b. Excludes groundbreaking cases for defendants based on recently enacted products reform statutes.
n.a. = not available

TABLE A-2
DISTRICT COURT PRODUCTS LIABILITY CASES

Year	N	Party Obtaining Judgment		Defendant Succeeds on Pretrial Motion			Amounts Recovered ^b		Trials	
		Plaintiff Wins	Rate for Plaintiff ^a	Issue Joined	Defend. Wins on Motion	Rate for Defendant	Mean Recovery (in thousands)	Median Recovery (in thousands)	N	Trial Rate ^c
1979	3,884	191	.405	1,854	81	.044	259	50	388	.100
1980	4,478	247	.400	2,256	101	.045	212	70	490	.109
1981	4,829	318	.398	2,461	132	.054	220	100	644	.133
1982	5,130	359	.395	2,959	141	.048	425	135	678	.132
1983	5,710	307	.348	3,264	148	.045	520	100	735	.129
1984	6,546	314	.356	3,203	173	.054	868	122	702	.107
1985	7,157	283	.357	3,756	225	.060	1,214	160	682	.095
1986	6,667	239	.317	3,901	217	.056	1,363	171	754	.113
1987	6,381	234	.325	3,863	212	.055	1,319	160	591	.093

Notes for Tables A-2 to A-4:

- a. This rate is based on the total number of cases showing a definitive judgment in which issue is joined.
 b. Monetary awards are calculated from cases in which issue is joined, plaintiff obtained judgment, and an amount is reported.
 c. Based on all terminations, not just cases in which issue was joined.

TABLE A-3
DISTRICT COURT PRIVATE NONTORT CASES

Year	N	Party Obtaining Judgment		Defendant Succeeds on Pretrial Motion			Amounts Recovered ^b		Trials	
		Plaintiff Wins	Rate for Plaintiff ^a	Issue Joined N	Defend. Wins on Motion	Rate for Defendant	Mean Recovery (in thousands)	Median Recovery (in thousands)	N	Trial Rate ^c
1979	43,775	3,675	.576	15,649	1,469	.094	149	24	3,122	.071
1980	44,513	3,907	.568	16,962	1,606	.095	124	24	3,318	.075
1981	51,241	4,168	.570	22,548	1,687	.075	199	26	3,596	.070
1982	54,150	4,667	.584	21,182	1,797	.085	288	28	3,688	.068
1983	61,513	5,177	.596	22,709	2,056	.091	281	31	3,670	.060
1984	67,300	5,175	.572	25,011	2,575	.103	592	39	3,676	.055
1985	68,038	5,055	.575	25,053	2,419	.097	1,108	50	3,598	.053
1986	73,398	5,371	.585	28,651	2,537	.089	1,145	52	3,537	.048
1987	74,905	5,909	.603	30,567	2,597	.085	891	51	3,611	.048

TABLE A-4
DISTRICT COURT OTHER (NON-PRODUCTS) TORT CASES

Year	N	Party Obtaining Judgment		Defendant Succeeds on Pretrial Motion			Amounts Recovered ^b		Trials	
		Plaintiff Wins	Rate for Plaintiff ^a	Issue Joined N	Defend. Wins on Motion	Rate for Defendant	Mean Recovery (in thousands)	Median Recovery (in thousands)	N	Trial Rate ^c
1979	22,606	2,204	.573	12,386	717	.058	176	25	2,559	.113
1980	25,546	2,081	.522	13,205	871	.066	102	21	2,652	.104
1981	25,482	2,291	.529	14,339	857	.060	156	32	3,061	.120
1982	24,969	1,978	.501	14,084	896	.064	237	33	2,773	.111
1983	26,098	2,073	.514	14,441	814	.056	322	36	2,858	.110
1984	27,155	1,882	.499	15,108	871	.058	669	53	2,933	.108
1985	27,461	1,750	.493	15,356	914	.060	1,004	65	2,741	.100
1986	28,495	1,803	.506	16,494	868	.053	1,177	65	2,816	.099
1987	27,330	1,680	.485	16,053	906	.056	785	65	2,589	.095

TABLE A-5
REGRESSION RESULTS

Independent variable for all regressions = Year

Regression Lines for Rate of Cases Benefiting Defendants, Rate of Defendant Winning as a Matter of Law, and Groundbreaking Cases for Plaintiff or Defendant. Published Opinions, 6 years

Dependent Variable	Year Coeff.	T	Constant	Adj. R Square	F	Signif. T and F	Durbin-Watson
Rate Benefiting Defendant	.026	3.94	.461	.744	15.50	.017	2.80
Rate Defendant Wins as Matter of Law	.025	11.32	.112	.962	128.08	.000	2.94
Rate of Groundbreaking Cases for Plaintiff	.002	.59	.073	-.149	.35	.586	2.03
Rate of Groundbreaking Cases for Defendant	.009	3.35	.015	.671	11.21	.029	1.96

Regression Lines for Plaintiff Judgment Rate, district court cases, 9 years

Dependent Variable	Year Coeff.	T	Constant	Adj. R Square	F	Signif. T and F	Durbin-Watson
Products Cases	-.011	-6.95	.423	.855	48.28	.000	2.68
Private Nontort Cases	.003	1.92	.568	.252	3.70	.096	1.77
Other Tort cases	-.008	-3.85	.553	.633	14.79	.006	2.02

Regression Lines for Defendants' Rate of Winning by Pretrial Motion, district court cases, 9 years

Dependent Variable	Year Coeff.	T	Constant	Adj. R Square	F	Signif. T and F	Durbin-Watson
Products Cases	.002	3.11	.043	.520	9.67	.017	2.06
Private Nontort Cases	.000	.11	.090	-.141	.01	.914	1.51
Other Tort Cases	-.001	-1.97	.063	.265	3.88	.090	2.94

Discussion: Times series often display serial correlation, which violates the ordinary least squares assumption of independence of the random error terms in successive measurements. See, e.g., W. Mendenhall & J. Reinmuth, *Statistics for Management and Economics* 636 (4th ed. 1982). Violation of this assumption renders measurements of R square and significance incorrect. Id. We have tested each series for serial correlation and, where appropriate, fit first-order autoregressive models to the data. In no case was the significance of a trend over time eliminated. In addition, since the dependent variable in the above regressions is a proportion the data do not rigorously satisfy the assumptions underlying ordinary least squares regression. We have also tested a model in which the logarithm of the odds of the dependent variable is analyzed using weighted regression. See R. Myers, *Classical and Modern Regression with Applications* 198-99 (1986). This produced no substantial change in the significance of the trends detected using ordinary least squares regression. We do not rely on the statistical analysis to suggest any trends not already evident from the graphs in the text.

TABLE A-6
ORDINARY LEAST SQUARES REGRESSION RESULTS
COMPONENTS OF CHANGE IN PLAINTIFF
JUDGMENT RATE

Dependent variable = Plaintiff Judgment Rate, calculated quarterly, 1981-1987

Adj. R Square = .717

Standard Error = .024

F = 18.06, Signif. F = .0000

Degrees of freedom = 23

Cases = 28

Durbin-Watson = 1.66

Independent Variables (quarterly)	Coeff.	T	Signif. T
Rate of Defendant Winning on Motion	-2.96	-5.33	.0000
Rate of Plaintiff Winning by Settlement	.22	4.92	.0001
Rate of Plaintiff Winning by Court Trial	.13	4.35	.0002
Rate of Plaintiff Winning by Jury Trial	.46	4.72	.0001
Constant	.16	3.53	.0018

Note: Quarterly data are used because annual data yield too few cases to obtain significant results. The annual data yield the same relationship among the variable coefficients but the results are not statistically significant. Quarterly data are available only since 1981.

TABLE A-7
NUMBER OF PRODUCTS CASES TRIED AND WON ON MOTION
FEDERAL DISTRICT COURTS 1979-1987

Year	Number Jury Trials	Number Court Trials	Number Cases Won By Defendant On Motion
1979	211	24	81
1980	285	38	101
1981	389	74	132
1982	382	78	141
1983	385	84	148
1984	411	76	173
1985	322	63	225
1986	327	42	217
1987	329	39	212

Note: Cases are limited to those in which issue was joined.

APPENDIX B

I. ASBESTOS ADJUSTMENTS TO DISTRICT COURT DATA

A. *The Need for Adjustment*

In 1984 the Administrative Office changed the way it codes products liability cases by creating a separate category for asbestos cases. This change may make comparisons of post-1984 data with pre-1984 data misleading. One way to deal with this change is to include the data for the asbestos category in the post-1984 figures. Were asbestos cases a less conspicuous part of the products legal landscape we would do so. But in recent years asbestos cases dominated all other products cases. A category that includes asbestos cases might bury any trends in other products cases. Rather than include the asbestos cases in the figures for 1985–1987, it is preferable to exclude asbestos cases from the 1979–1984 figures.

B. *Estimating the Number of Terminations*

Since this Article presents results based on case terminations, the first step in addressing the asbestos effect on our calculations is to estimate the number of federal asbestos terminations in each year from 1979 to 1984. Detailed existing studies provide both the number of asbestos filings in each year and the ratio of terminations to filings in each year. Table I provides an estimate of the number of asbestos terminations. Column 2 shows the number of asbestos filings in each year based on the most comprehensive study of products filings.²⁴¹ Column 3 shows the annual ratio of filings to terminations based on Willging's work with ten districts.²⁴² For 1979 and 1980, where Willging shows no ratio, we use the ten-year average of .276.²⁴³ Column 4 is the product of the number of filings in a

241. GAO, *supra* note 158, at 22. This study went beyond the Administrative Office data in seeking to discover levels of asbestos activity. *Id.* at 1–2, 45–47. No similar effort has been made with respect to products filings generally. Therefore, using Administrative Office data for nonasbestos products filings and the GAO report's asbestos filing statistics overstates the volume of asbestos litigation relative to nonasbestos products litigation. This provides an added measure of confidence that our asbestos adjustments, always made in a way that undermines our theses, probably more than fully compensate for any asbestos effect.

242. T. WILLGING, *supra* note 173, at 118. Willging went beyond the published data to arrive at his figures and conducted a detailed study of ten federal districts. *Id.* at 3. The 10 districts were all among the 15 districts with the most asbestos filings. *Id.* at 3 n.6. Together they accounted for about 45% of all asbestos terminations from 1977 to 1986. *Id.* at 25–26 (Tables 3 & 4).

243. T. WILLGING, *supra* note 173, app. at 133.

year times the ratio. It thus estimates the number of annual asbestos terminations that may affect the Administrative Office data.

TABLE I
ESTIMATED ASBESTOS TERMINATIONS 1979-1984

1 Year	2 Filings	3 Ratio	4 Estim. Termins.
1979	361	.276	100
1980	1137	.276	314
1981	1625	.362	588
1982	1869	.273	510
1983	1926	.222	428
1984	2922	.268	783

C. *Adjusting the Data Used to Calculate Judgment Rates, Motion Success Rates, Trial Rates, and Expected Returns*

Plaintiff Judgment Rate. Our thesis about plaintiff judgment rates is that they have declined over time. The asbestos cases pose a problem for our evidence bearing on this thesis only if they were a relatively successful class of cases in 1979-1984, thereby masking the more general products category's lack of success. For the three years for which the Administrative Office does report asbestos cases separately (1985-1987), the computer tapes show that the highest judgment rate for plaintiff is .46. This is well above the judgment rate for other products cases.²⁴⁴ To be sure the asbestos cases removed from the products category do not distort results in the wrong direction, we assume a plaintiff judgment rate of .5, higher than the largest observed rate of .46. The judgment rate of .5 is applied to all asbestos cases for 1979-1984. We thus treat asbestos cases as unrealistically successful and remove an appropriate number of terminations at a fifty percent plaintiff win rate for each of the years 1979-1984. Removing these cases depresses the plaintiff judgment rate in 1979-1984 to below what it probably was. This assures that the plaintiff judgment rate decline we observe is not the result of asbestos cases being included in the 1979-1984 portion of the sample and falsely increasing the observed plaintiff judgment rate.

Defendant Win Rate on Motion. Our thesis about defendants prevailing at the motion stage is that it has increased over time. The asbestos cases pose a danger to our evidence bearing on this

244. See *supra*, Figure 4.

thesis only if they had a relatively low rate of success for defendants on motion in 1979–1984, thereby masking the more general products category's higher success at the motion stage. Willging reports an overall disposition at the motion stage of 7%.²⁴⁵ Of this 7% not more than 1% could be victories for plaintiffs.²⁴⁶ In the years for which the Administrative Office reports asbestos figures, asbestos plaintiffs prevailed by pretrial motion in not more than .6% of cases. To be conservative we reduce the 7% figure by 1%, to 6%. Thus, using Willging's data, the lowest the defendant success rate could be is 6%. For the three years for which the Administrative Office does report asbestos cases separately (1985–1987), the defendant motion success rates range from 2 to 4%. Willging's cumulative figure of 6% applies to the years 1977–1986. With a large number of recent cases succeeding at a 2% rate, the early cases must have succeeded at more than a 2% rate for the full period to have a 7% average. Six % is thus a conservative estimate of the defendant win rate on motion for 1979–1984. To be conservative we reduce this low estimate by a factor of 2, to 3%. We remove an appropriate number of cases from the each of the years 1979–1984 and treat 3% of them as having won on motion. This assures that the observed defendant rate of winning on motion is not the result of asbestos cases being included in the 1979–1984 portion of the sample and falsely decreasing the observed defendant rate of winning on motion.

Trial Rate. Our thesis about products trial rates is that they have increased relative to other litigation in recent years. The asbestos cases pose a danger to our evidence bearing on this thesis only if they had a relatively low trial rate in 1979–1984, thereby masking the more general products category's higher trial rate during the same period. This would make rates in 1985–1987 look like they have increased over earlier years more than they actually have. For the three years for which the Administrative Office does report asbestos cases separately (1985–1987), the lowest trial rate is about 4%. To be conservative we use 3% for the 1979–1984 period, except for 1980–1982, where Kakalik *et al.* report a trial rate of 3.8% (excluding settlements after trial began, which we do not treat as tried cases).²⁴⁷ We remove an appropriate number of cases from each of the years 1979–1984 and treat 3 (or 3.8)% of them as having been tried. This assures that the observed trial rate is not the

245. T. WILLGING, *supra* note 173, at 25 (Table 3).

246. *See supra* note 202.

247. VARIATION IN ASBESTOS LITIGATION, *supra* note 192, at 21 (Table 2.1).

result of asbestos cases being included in the 1979–1984 portion of the sample and falsely decreasing the observed trial rate for that period.

Size of Awards. Our thesis about expected returns is that the returns in products cases have decreased relative to other litigation in recent years. Asbestos cases pose a danger to our evidence bearing on this thesis only if they had relatively high monetary awards in 1979–1984, thereby masking the lower awards for the more general products category during that earlier period. We use two measures of award size, the median and the mean. We have not adjusted the median figures for 1979–1984 because the available evidence suggests that the median asbestos awards for the period were lower than for other products cases. We have adjusted the mean awards downward to reflect the possible influence of asbestos cases.

1. *Median Award.* For the period 1980–1982, Kakalik *et al.* report a median recovery in asbestos claims closed before trial of \$27,000, and a median recovery in claims closed at trial of \$123,000.²⁴⁸ The estimated size of the median is thus heavily dependent on the method of case termination. Their measure of trials (which includes settlements after trial began) shows trials comprising less than 5% of terminations. Given the small number of tried cases we can conservatively estimate the median for a combined category of tried and not-tried cases at the reported 60th percentile for not-tried cases. This is \$37,000.²⁴⁹ For the three years closest to the 1980–1982 period in the Kakalik study, the Administrative Office data show median awards in nonasbestos products cases of \$70,000 (1980), \$100,000 (1981), and \$135,000 (1982).²⁵⁰ In addition, in two of the three years (1985–1987) for which the Administrative Office data contain useable asbestos figures, median awards in asbestos cases were lower than in nonasbestos products cases. It is unlikely that including asbestos cases recovery figures for the 1979–1984 period masks the general products category's lower median awards to any substantial extent.

2. *Mean Award.* For the period 1980–1982, Kakalik *et al.* report a mean recovery in asbestos cases of \$64,000.²⁵¹ For the relatively few (2.5%) terminated cases won by plaintiffs at trial, the figure is \$388,000. For the three years closest to the 1980–1982 period in the Kakalik study, the Administrative Office data show

248. *Id.* at 21 (Table 2.2).

249. *Id.*

250. These are cases in which plaintiff obtained judgment and an award is reported.

251. VARIATION IN ASBESTOS LITIGATION, *supra* note 192, at 21 (Table 2.2).

mean awards in nonasbestos products cases of \$219,000 (1980), \$227,000 (1981), and \$438,000 (1982). The asbestos cases pose a threat to our thesis only if the 1979–1984 data include many tried asbestos cases with awards higher than the observed means. Yet, for the period of interest, trials in federal asbestos cases were rare events. For all districts, Willging reports 149 federal asbestos trials for the period 1977–1986.²⁵² Assume that the period we need to consider adjusting for (1979–1984) contained about two-thirds (more than its proportional share) of these, or 100 trials. Of these, plaintiffs would be expected to have won only half or fifty cases. (This is the plaintiff success rate at trial for the years for which the Administrative Office does reports asbestos cases separately). Of these fifty cases not all would show up in the Administrative Office data with reports of the size of awards. And even if all fifty cases are in the data, they are part of a pool of 1,435 cases used to calculate the mean awards for the 1979–1984 period. One would also have to account for asbestos cases in the sample generating the observed mean awards for 1979–1984 that did not end in trial. For these, the available evidence is that the mean award is lower than the observed mean award. It is unlikely that inclusion of asbestos cases in the 1979–1984 period had any significant affect on the observed mean awards.

There is, however, important evidence favoring an adjustment. For the three years (1985–1987) for which the Administrative Office usefully reports asbestos data separately, asbestos cases, had they been included with the products category, would have increased the number of cases generating the mean figure by 10.7% and increased the mean award by 2.3%. We therefore adjust the mean award for 1979 to 1984 down by 3% to account for the possibility of asbestos cases masking low awards. This adjustment has no appreciable effect on observed trends.

252. T. WILLGING, *supra* note 173, at 25 (Table 3).