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# A GAME THEORETIC ANALYSIS OF CONTRIBUTION AND CLAIM REDUCTION IN ANTITRUST TREBLE DAMAGE SUITS

JOHN CIRACE\*

Under the antitrust laws of the United States, convicted violators are jointly and severally liable for three times the damage attributable to their illegal acts.<sup>1</sup> Thus, as a matter of right, plaintiffs need not sue all antitrust violators who have injured them and, at the limit, may elect to place the entire burden of compensatory and punitive damages on one violator.<sup>2</sup> Recently, defendants in treble damage suits have argued that allowing plaintiffs to choose which of them will bear a potentially huge judgment gives plaintiffs unfair bargaining leverage. Consequently, defendants have sought via third-party complaints to require alleged coviolators, who have not been sued by plaintiffs, to contribute to the judg-

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<sup>1</sup> See *Wainwright v. Kraftco Corp.*, 58 F.R.D. 9, 10-11 (N.D. Ga. 1973) (citing *Walker Distr. Co. v. Lucky Lager Brewing Co.*, 323 F.2d 1, 8 (9th Cir. 1963); *Washington v. American Pipe & Constr. Co.*, 280 F. Supp. 802, 804-05 (W.D. Wash. 1968)). The statutory basis for civil liability is found in section 4 of the Clayton Act, which provides that "[a]ny person who shall be injured in his business or property by reason of anything forbidden in the antitrust laws may sue therefor . . . and shall recover threefold the damages by him sustained, and the cost of suit, including a reasonable attorney's fee." Clayton Act, ch. 323, § 4, 15 U.S.C. § 15 (1976).

<sup>2</sup> *Washington v. American Pipe & Constr. Co.*, 280 F. Supp. 802, 804-05 (W.D. Wash. 1968); see *Solomon v. Houston Corrugated Box Co.*, 526 F.2d 389, 392 n.4 (5th Cir. 1976). In *Flintkote Co. v. Lysfjord*, 246 F.2d 368 (9th Cir.), *cert. denied*, 355 U.S. 835 (1957), the plaintiff settled out of court with all but one of the co-conspirators for a total payment of \$20,000. At the trial, the jury found actual damages of \$50,000. The court held that the single defendant who had gone to trial was liable for treble the total amount of actual damages, \$150,000, less the \$20,000 payment by the settling co-conspirators. *Id.* at 397-98.

In a nationwide class action involving an entire industry, a sole defendant may have damages exceeding one billion dollars assessed against it. See, e.g., *In re Corrugated Container Antitrust Litigation*, 84 F.R.D. 40, 41 (S.D. Tex.), *aff'd mem.*, 606 F.2d 319 (5th Cir. 1979), *cert. dismissed*, 49 U.S.L.W. 3281 (U.S. Oct. 21, 1980), (liability of nonsettling defendants estimated at \$600 million to \$3 billion).

ment liability.<sup>3</sup>

There is conflict among federal courts of appeals as to whether a right to contribution should be created as a matter of antitrust common law.<sup>4</sup> In order to resolve this conflict the Supreme Court has granted certiorari in *Texas Industries, Inc. v. Radcliff Materials, Inc.*<sup>5</sup> The contribution question is also important because the

<sup>3</sup> *E.g.*, *Professional Beauty Supply, Inc. v. National Beauty Supply, Inc.*, 594 F.2d 1179 (8th Cir. 1979); *Wilson P. Abraham Constr. Corp. v. Texas Indus., Inc.*, No. 75-2820 (E.D. La. Oct. 5, 1977), *aff'd*, 604 F.2d 897 (5th Cir. 1979), *cert. granted sub nom.* *Texas Indus., Inc. v. Radcliff Materials*, 101 S. Ct. 351 (1980); *In re Beef Indus. Antitrust Litigation*, J.P.M.D.L. No. 248 (N.D. Tex. Sept. 1, 1978), *aff'd*, 607 F.2d 167 (5th Cir. 1979); *In re Fine Paper Antitrust Litigation*, 82 F.R.D. 143 (E.D. Pa. 1979); *Hedges Enterprise v. Continental Group, Inc.*, 1979-1 Trade Cas. ¶ 62,717 (E.D. Pa. 1979); *In re Corrugated Container Antitrust Litigation*, 84 F.R.D. 40 (S.D. Tex.), *aff'd mem.*, 606 F.2d 319 (5th Cir. 1979), *cert. dismissed*, 49 U.S.L.W. 3281 (U.S. Oct. 21, 1980); *In re Ampicillin Antitrust Litigation*, 82 F.R.D. 652 (D.D.C. 1979); *Alabama v. Blue Bird Body Co.*, No. 75-23-N (M.D. Ala. March 15, 1979); *El Camino Glass v. Sunglo Glass Co.*, 1977-1 Trade Cas. ¶ 61,533 (N.D. Cal. 1976).

<sup>4</sup> Since there is no statutory right of contribution in federal antitrust law, courts have found it necessary to consider the contribution question as a matter of federal common law. *Wilson P. Abraham Constr. Corp. v. Texas Indus., Inc.*, 604 F.2d at 900, 901 n.7. At one time, many American jurisdictions denied contribution to all tortfeasors based upon the early English case of *Merryweather v. Nixan*, 101 Eng. Rep. 1337 (1799). RESTATEMENT (SECOND) OF TORTS § 886A, Comment a (1977). The American common-law rule was criticized as unfair, however, because it denied contribution even where the harm was inflicted negligently. *Id.*; W. PROSSER, LAW OF TORTS § 50, at n.60 (4th ed. 1971). A substantial number of the states have allowed contribution among tortfeasors, either by statute or judicial decision, *id.*, but the majority of jurisdictions have formulated diverse rules limiting the scope of contribution, and have denied its application to intentional tortfeasors. See RESTATEMENT (SECOND) OF TORTS § 886A, Comment a.

In the context of antitrust litigation, however, federal courts generally have refused to allow contribution. *E.g.* *Goldlawr, Inc. v. Shubert*, 276 F.2d 614, 616 (3d Cir. 1960); *Olson Farms, Inc. v. Safeway Stores, Inc.*, 1977-2 Trade Cas. ¶ 61,698 (D. Utah 1977); *El Camino Glass v. Sunglo Glass Co.*, 1977-1 Trade Cas. ¶ 61,533 (N.D. Cal. 1976); *Sabre Shipping Corp. v. American President Lines, Ltd.*, 298 F. Supp. 1339 (S.D.N.Y. 1969); See *Wainwright v. Kraftco Corp.*, 58 F.R.D. 9 (N.D. Ga. 1973). A single circuit has held that contribution is allowed in antitrust cases at the discretion of the trier of fact upon consideration of the factors enumerated in Justice White's concurrence in *Perma Life Mufflers, Inc. v. International Paper Corp.*, 392 U.S. 134 (1968). *Professional Beauty Supply, Inc. v. National Beauty Supply, Inc.*, 594 F.2d 1179 (8th Cir. 1979). *Professional Beauty Supply* did not involve the problem of settling defendants, however, *see id.*, at 1184, and the reaction to the decision has been mixed. Compare *Sellers, Contribution in Antitrust Damage Actions*, 24 VILL. L. REV. 829, 848-52 (1978-1979) with S. 1468, 96th Cong., 1st Sess. 9-10, 125 CONG. REC. 8931 (1979). Subsequent federal court decisions have retained the no-contribution rule. *Wilson P. Abraham Constr. Corp. v. Texas Indus., Inc.*, 604 F.2d 897 (5th Cir. 1979), *cert. granted sub nom.* *Texas Indus. Inc. v. Radcliff Materials*, 101 S. Ct. 351 (1980); *In re Corrugated Container Antitrust Litigation*, 606 F.2d 319 (5th Cir. 1979), *cert. dismissed*, 49 U.S.L.W. 3281 (U.S. Oct. 21, 1980); *In re Ampicillin Antitrust Litigation*, 82 F.R.D. 652 (D.D.C. 1979).

<sup>5</sup> *Texas Indus., Inc. v. Radcliff Materials*, 101 S. Ct. 351 (1980), *cert. from*, *Wilson P. Abraham Constr. Corp. v. Texas Indus., Inc.*, 604 F.2d 897 (5th Cir. 1979). In another recent

United States Senate Committee on the Judiciary has reported out a bill favoring a right to contribution in antitrust treble damage suits involving price fixing.<sup>6</sup> Moreover, the American Bar Association (ABA) is on record as favoring contribution,<sup>7</sup> and several commentators also have argued in favor of at least a limited right of contribution.<sup>8</sup>

The choice between joint and several liability without contribution, at one end of the spectrum, or contribution at the other, will have a marked impact upon pretrial settlement negotiations. The Article will attempt, therefore, to demonstrate through ele-

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case, the Supreme Court dismissed the appeal after granting certiorari because the parties settled out of court, rendering the antitrust contribution question moot. *In re Corrugated Container Antitrust Litigation*, cert. dismissed, 49 U.S.L.W. 3281 (U.S. Oct. 21, 1980). The speed with which the Supreme Court replaced the *Corrugated Container* case indicates the importance of the antitrust contribution issue. N.Y. Times, Nov. 4, 1980, at D3, col. 1.

<sup>6</sup> S. 1468, 96th Cong., 1st Sess. 9-10, 125 CONG. REC. 8931 (1979); see *Antitrust Equal Enforcement Act: Hearings on S. 1468 Before the Subcommittee on Antitrust, Monopoly, and Business Rights of the Senate Committee on the Judiciary*, 96th Cong., 1st Sess. (1979) [hereinafter cited as *Hearings on S. 1468*].

In some cases, defendants have negotiated settlements which contain indemnity provisions in order to protect themselves should Congress or the courts create a right of contribution. In one case, *In re Cement and Concrete Antitrust Litigation*, MDL No. 296 (D. Ariz. July 31, 1979), an initial settlement expressly provided for a reduction in judgment, if any, by an amount equal to the settling defendant's contribution liability. See No. 927 ANTI-TRUST & TRADE REG. REP. (BNA) A-1 (August 16, 1979); Proposed Settlement Agreement between Plaintiffs and Defendant Coleman Dairies, Inc., Little Rock School Dist. v. Borden, Inc., [1980] 1 TRADE REG. REP. (CCH) ¶ 63,059 (E.D. Ark. 1979). The effect of the indemnity provision would depend upon the liability rule which is adopted. If contribution is not allowed, plaintiffs will not have to indemnify settling defendants. If contribution is adopted, an indemnity provision in a settlement agreement would be equivalent to a claim reduction provision. For example, assume that there are two equally liable defendants, and one defendant settles before trial for \$2 million. If the total judgment liability is \$6 million, the defendant who tried the case and lost has a judgment liability of \$4 million. Asserting its right to contribution, the defendant who lost will demand \$1 million from the one who settled. If the settlement contained an indemnity provision, the result after a setoff is that the plaintiff would receive \$1 million from the settling defendant, and \$4 million from the defendant who went to trial who, in turn, would receive \$1 million from the settling defendant.

<sup>7</sup> RESOLUTIONS AND REPORT OF THE SECTION OF ANTI-TRUST LAW OF THE AMERICAN BAR ASSOCIATION ON PROPOSED AMENDMENT OF THE CLAYTON ACT TO PERMIT CONTRIBUTION IN DAMAGE ACTIONS BROUGHT THEREUNDER (1979) [hereinafter cited as ABA REPORT]. The Report was accompanied by a minority report opposing any establishment of contribution rights.

<sup>8</sup> E.g., Corbett, *Apportionment of Damages and Contribution Among Coconspirators in Antitrust Treble Damage Actions*, 31 FORDHAM L. REV. 111 (1962); Note, *Contribution Among Antitrust Violators*, 29 CATH. U.L. REV. 669 (1980); Note, *Contribution in Private Antitrust Suits*, 63 CORNELL L. REV. 682 (1978); Izzard & Miller, *High Price-Fixing Awards Require Abolition of Joint, Several Liability*, Nat'l L.J., Aug. 27, 1979, at 22, col. 1.

mentary concepts of game theory<sup>9</sup> that a no-contribution rule is one extreme, in the sense that this rule puts maximum pressure on individual defendants to settle *before* other defendants and at the latter's expense. Contribution and claim reduction, on the other hand, give individual defendants an incentive to settle *after*, and at the expense of, other defendants.

For example, if the defendants have a right to contribution that cannot be extinguished by a settlement between some but not all defendants, there would be little incentive to negotiate; settling defendants could subsequently be held liable to those defendants who elected to go to trial and lost. In such a legal environment no settlement would be binding unless the settlement was agreed upon unanimously. On the other hand, if a right to contribution is created that permits binding settlements, some restrictions must be placed upon these settlements, otherwise the plaintiffs could defeat the nonsettling defendants' right to contribution by settling with some defendants for a nominal sum. In general, whenever a defendant settles with the plaintiff for a sum less than three times the damages attributable to its acts, each remaining defendant faces an increased risk that it will be forced to bear more than its proportionate share of the damages.<sup>10</sup>

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<sup>9</sup> The theory of games of strategy, developed by John Von Neumann in 1928, and first published in 1944, J. VON NEUMANN & O. MORGENSTERN, *THEORY OF GAMES AND ECONOMIC BEHAVIOR* (3d ed. 1964), has assumed a fundamental role in providing general principles for the study of decisionmaking, especially in the context of oligopolistic and monopolistic competition. See, e.g., M. SHUBIK, *STRATEGY AND MARKET STRUCTURE: COMPETITION, OLIGOPOLY, AND THE THEORY OF GAMES* (1959); M. BACHARACH, *ECONOMICS AND THE THEORY OF GAMES* 66-72 (1977). Game theory provides, however, a useful model for studying economic behavior in several decisionmaking contexts. A basic feature of the theory is the recognition that the results of an economic decision do not depend merely upon the actions taken by one rational decisionmaker or upon chance. Rather, the outcome is also affected by other entities who sometimes oppose, and sometimes support the action taken. Morgenstern, *Foreword* to M. SHUBIK, *STRATEGY AND MARKET STRUCTURE: COMPETITION, OLIGOPOLY, AND THE THEORY OF GAMES* viii (1959). For a comprehensive description of the essentials of game theory, see R.D. LUCE & H. RAIFFA, *GAMES AND DECISIONS, INTRODUCTION AND CRITICAL SURVEY* (1957); J.C. MCKINSEY, *INTRODUCTION TO THE THEORY OF GAMES* (1952). For a game theoretic analysis of major business decisions of the twentieth century, see J. McDONALD, *THE GAME OF BUSINESS* (1975).

<sup>10</sup> With regard to the treatment of settling defendants if contribution is allowed, compare the 1939 and 1955 versions of the Uniform Contribution Among Tortfeasors Act, 12 *UNIFORM LAWS ANN.* 57, 58 (1975), with the 1977 Uniform Comparative Fault Act, 12 *UNIFORM LAWS ANN.* 27 (Supp. 1979) [hereinafter cited as the 1939, 1955, & 1977 Uniform Acts]. The 1939 Act provides that a tortfeasor who settles with an injured party remains liable to nonsettling joint tortfeasors for contribution. 1939 Uniform Act, *supra*, §§ 4, 5. Thus, regardless of settlement, the burden of compensating the injured party is distributed among

The settlement issue has not, however, gone unrecognized by Congress. The proposed Senate legislation stipulates that if one of several defendants in a price-fixing suit settles with the plaintiff, the total value of the judgment is to be reduced by the greater of the amount stipulated by the release, the amount of consideration paid for it, or treble damages attributable to the settling defendant's market share.<sup>11</sup> This is the claim reduction or carve out provision of the bill. Game theory principles show, however, that contribution and claim reduction is too favorable to defendants because it gives them an incentive to wait and settle last.<sup>12</sup> Joint and several liability without contribution, however, is too favorable to plaintiffs because it puts too much pressure on individual defendants to settle first.<sup>13</sup>

In this Article, settlement pressure is analyzed in the context

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all joint tortfeasors according to the share of damage allocable to each one. The injured party's claim is reduced only by the amount of settlement payments received. Tortfeasors have little incentive to settle because they remain liable to other defendants for contribution. As an exception to the general rule, the 1939 Act allows a tortfeasor to avoid contributive liability if the injured party agrees to a pro rata reduction of its claim. 1939 Uniform Act, *supra*, § 5. Plaintiffs' attorneys, however, usually have not been willing to agree to reductions of claims. See 1955 Uniform Act, *supra*, § 4; Note, *Contribution Among Antitrust Violators*, 29 CATH. U.L. REV. 669, 673 n.23 (1980).

If the 1939 Act represents one extreme, the 1955 Act represents the other. The latter provides that tortfeasors who settle in good faith with the injured party extinguish their liability to nonsettling tortfeasors for contribution, and that the claim is reduced only by the greater of the amount received for releasing the settling tortfeasor from liability or the amount stipulated in the settlement agreement. 1955 Uniform Act, *supra*, § 4. Although the 1955 Act provides a strong incentive toward settlement, it does so at the expense of those who do not settle. The burden of compensating the injured party would shift from those who settle to those who do not because tortfeasors generally will settle for less than their proportionate share. Moreover, subject to the good faith limitation, the right to contribution could be defeated by settling with some parties for a nominal sum.

By tying settlements to a pro rata claim reduction provision, the Uniform Comparative Fault Act of 1977 attempted to avoid the Scylla of the 1939 Act, which substantially weakened the incentive to settle, and the Charybdis of the 1955 Act, which substantially weakened the right to contribution. The 1977 Act provides that upon settlement with one tortfeasor, the injured party's claim against other tortfeasors is automatically reduced by the amount of the released tortfeasor's equitable share of the joint obligation. 1977 Uniform Act, *supra*, § 6. It would appear that this provision avoids the extremes indicated above and prevents the injured party from shifting the burden of paying for the injured party's losses from settling to nonsettling defendants. However, as shown in the game theoretic analysis discussed in Section II, claim reduction shifts bargaining power too much in favor of defendants.

<sup>11</sup> S. 1468, 96th Cong., 1st Sess. § 41(b) (1979).

<sup>12</sup> The pressure on individual defendants to settle last can be modeled by the Chicken Game. See text accompanying note 34 *infra*.

<sup>13</sup> The incentive to settle before the other defendants can be modeled by the Prisoner's Dilemma Game. See text accompanying note 30 *infra*.

of four liability rules. In Rule One, which is most favorable to plaintiffs and least favorable to defendants, the defendants have no right to contribution. In Rule Two, which favors the plaintiff over the defendant but to a lesser degree, the plaintiff chooses which defendants to sue, but the no-contribution rule is modified by giving all defendants a one-time opportunity to accept a minimum or pattern settlement. Rule Three, which is somewhat more favorable to defendants than Rule Two, is Rule Two plus a right to contribution against nondefendant violators equal to the minimum or pattern settlement. Rule Four, contribution and claim reduction, is the most favorable to the defendants and the least favorable to the plaintiffs. It is shown below that the two intermediate liability standards, represented by Rules Two and Three, will adjust settlement pressure in a fairer manner than will Rules One or Four.

Section I presents syllogisms for and against improving the bargaining position of defendants in private treble damage suits. Those who are against contribution and claim reduction usually argue in terms of a deterrence syllogism; those who are in favor of contribution and claim reduction argue in terms of a blackmail syllogism. Section II uses elementary concepts of game theory to provide insights into the nature of bargaining power under a no-contribution rule, contribution and claim reduction, and intermediate liability rules based upon minimum or pattern settlements.

### I. SYLLOGISMS FOR AND AGAINST IMPROVING THE BARGAINING POSITION OF DEFENDANTS IN TREBLE DAMAGE SUITS

The major argument against improving the bargaining position of defendants in antitrust treble damage suits rests on deterrence.<sup>14</sup> There is evidence that business people are risk adverse; that is, they are more likely to choose a high probability of a small loss over a small probability of a large loss.<sup>15</sup> Second, there is evi-

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<sup>14</sup> See *In re Corrugated Container Antitrust Litigation*, 80 F.R.D. at 42; S. 1468, *supra* note 6, at 17-19; Note, *Contribution Among Antitrust Violators*, 29 CATH. U.L. REV. 669, 685-86 (1980); Note, *Contribution in Private Antitrust Actions*, 93 HARV. L. REV. 1540, 1544-48 (1980).

<sup>15</sup> See *Wilson P. Abraham Constr. Corp. v. Texas Indus., Inc.*, 604 F.2d 897, 901 (5th Cir. 1979), *cert. granted sub nom. Texas Indus., Inc. v. Radcliff Materials*, 49 U.S.L.W. 3321 (U.S. Nov. 3, 1980); K. ELZINGA & W. BRETT, *The Antitrust Penalties: A Study in Law and Economics* 117-26 (1976); E. MISHAN, *COST-BENEFIT ANALYSIS* 306-07, 316, 338 (1976); Note, *Contribution in Private Antitrust Suits*, 63 CORNELL L. REV. 682, 702-03 (1978).

dence that some business people decide whether to violate antitrust laws based on risk-benefit analysis.<sup>16</sup> Given that potential violators are rational and risk averse, the possibility that one violator of many may have to bear the entire treble damage burden provides greater deterrence than if the burden were shared via contribution and claim reduction or through some other risk dispersion method.<sup>17</sup> Thus, it is argued that a no-contribution rule maximizes deterrence. As a representation of antitrust reality, however, this deterrence syllogism is incomplete because it does not take into account either the interests of potential antitrust plaintiffs<sup>18</sup> or the substantial uncertainty that given conduct may or may not violate

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<sup>16</sup> John Shenefield, Assistant Attorney General in charge of the Antitrust Division testified that if the contribution and claim reduction provisions of S. 1468 were adopted, it would increase the possibility that businessmen would use risk-benefit analysis as an aid in deciding whether a contemplated violation of the antitrust laws would be in a firm's best interest. See *Hearings on S. 1468*, *supra* note 6, at 27. There is some evidence that businessmen have used this kind of analysis in deciding whether to engage in price fixing agreements. See ABA ANTITRUST SECTION, ANTITRUST LAW DEVELOPMENTS 2 & n.3 (Supp. 1979); BUSINESS WEEK, June 2, 1975, at 46-48 (quoting admissions by businessmen that criminal fines were a small price to pay for the profits derived from price fixing); Note, *Contribution Among Antitrust Violators*, 29 CATH. U.L. REV. 669, 693 (1980).

<sup>17</sup> The argument against contribution is that, since businessmen are risk averse, the small prospect of a high penalty is a greater deterrent than a higher likelihood of lower penalties. See *Wilson P. Abraham Constr. Corp. v. Texas Indus., Inc.*, 604 F.2d at 901; *In re Corrugated Container Antitrust Litigation*, 80 F.R.D. at 245. *But cf.* *Professional Beauty Supply, Inc. v. National Beauty Supply, Inc.*, 594 F.2d at 1185; S. 1468, *supra* note 5, at 9 (deterrence may be increased by contribution because of greater probability of liability).

<sup>18</sup> In addition to the argument that a no-contribution rule is the best deterrent because antitrust defendants are risk averse, see note 17 and accompanying text *supra*, it has been noted that improving the defendant's position by allowing contribution might increase the complexity of the litigation and thereby discourage private plaintiffs from bringing suit. *Wilson P. Abraham Constr. Corp. v. Texas Indus., Inc.*, 604 F.2d at 905-06. Plaintiffs in antitrust litigation have been afforded favorable treatment for reasons stated by the Supreme Court:

[t]he purposes of the antitrust laws are best served by insuring that the private action will be an ever-present threat to deter anyone contemplating business behavior in violation of the antitrust laws . . . . [T]he law encourages [the private plaintiff's] suit to further the overriding public policy in favor of competition. A more fastidious regard for the relative moral worth of the parties would only result in seriously undermining the usefulness of the private action as a bulwark of antitrust enforcement.

*Perma Life Mufflers, Inc. v. International Parts Corp.*, 392 U.S. 134, 139 (1968). The *Perma Life* Court held that a claim in an antitrust action would not be barred, even though the plaintiff participated in the violation, provided that the plaintiff was not a substantially equal participant. *Id.* For ways in which the courts have effectuated the policy of encouraging private plaintiffs in antitrust suits, see Sellers, *Contribution in Antitrust Damage Actions*, 24 VILL. L. REV. 829, 829 n.4 (1979).



the antitrust laws.<sup>19</sup>

The syllogism in favor of improving the bargaining position of defendants in antitrust suits rests on the possibility that ambiguities in the antitrust laws can be used as a vehicle for blackmail. Assume that plaintiffs, or plaintiffs' lawyers, are rational profit maximizers who wish to take advantage of the defendant's risk aversion.<sup>20</sup> Second, there is often a great deal of ambiguity as to whether an antitrust violation has occurred. Thus, a no-contribution rule is said to encourage sham suits and blackmail<sup>21</sup> because it

<sup>19</sup> Compare *United States v. General Electric Co.*, 272 U.S. 476 (1926) with *Simpson v. Union Oil Co.*, 377 U.S. 13 (1964). Although the antitrust rule which makes price fixing illegal per se appears to be clear and concrete at first glance, in practical application, it often requires delicate appraisals of conduct and sophisticated economic analysis. See Turner, *The Definition of Agreement Under the Sherman Act: Conscious Parallelism and Refusals to Deal*, 75 HARV. L. REV. 655 (1962). Turner showed that in the absence of direct evidence, the courts often cannot determine whether oligopolistic firms quote nearly identical prices due to an agreement to fix prices or because, as rational firms, they recognize their interdependence. *Id.* at 657. Turner's conclusions, which are solidly based on oligopoly theory, have withstood subsequent challenges. See Markovits, *Oligopolistic Pricing Suits, the Sherman Act, and Economic Welfare*, (parts I & II), 26 STAN. L. REV. 493, 717 (1974); (part III), 27 STAN. L. REV. 307 (1975); (part IV), 28 STAN. L. REV. 45 (1975); Markovits, *A Response to Professor Posner*, 28 STAN. L. REV. 919 (1976); Posner, *Oligopoly and the Antitrust Laws: A Suggested Approach*, 21 STAN. L. REV. 1562 (1969); Posner, *Oligopolistic Pricing Suits, the Sherman Act, and Economic Welfare: A Reply to Professor Markovits*, 28 STAN. L. REV. 903 (1976); Spence, *Markovits on Imperfect Competition*, 28 STAN. L. REV. 915 (1976).

Even where there is open reciprocal exchange of price information, there may not be an antitrust violation. In *United States v. United States Gypsum Co.*, 438 U.S. 422 (1978), the Supreme Court held that manufacturers of gypsum board could not be convicted of a conspiracy to fix prices on mere evidence that they telephoned one another to determine the price currently being offered on gypsum board to specific customers. *Id.* at 435. Although the Court said that intent must be established in a criminal antitrust violation, *id.* at 443, it held that an "action undertaken with knowledge of its probable consequences and having the requisite anticompetitive effects can be a sufficient predicate for a finding of criminal liability under the antitrust laws." *Id.* at 444. A recent theoretical article illuminates and clarifies this rule. See Dewey, *Information, Entry, and Welfare: The Case for Collusion*, 69 AMER. ECON. REV. 586 (1979).

<sup>20</sup> The assumption that defendants are risk averse is borne out by statistical evidence. See Rowe, *On Fostering Fights*, N.Y. Times, Aug. 6, 1980, at A21, Col. 2. Rowe states that "[a]bout 80 percent of all private antitrust cases are settled out of court. Most others end in victory for the defendant. A recent study found that antitrust defendants won by a ratio of 7 to 1." *Id.* By these statistics, it seems senseless for defendants to settle. But, as Rowe further points out:

Broad antitrust claims for many millions can be filed with minimal evidence and imagination, and they set off extended discovery proceedings. A sophisticated defense is costly and drains the time of key executives . . . Thus, even with a 90 percent chance of ultimate vindication in a huge lawsuit, a few million paid for peace can be a bargain—and a bonanza for the plaintiff and his lawyers.

*Id.*

<sup>21</sup> See Handler, *The Shift from Substantive to Procedural Innovations in Antitrust*

exposes defendants to greater risk than does contribution and claim reduction or some other liability rule which ameliorates settlement pressure on defendants. This blackmail syllogism is the other side of antitrust reality.

The large increase in the number of antitrust treble damage suits which have been instituted in the last twenty years<sup>22</sup> indicates the need to consider alternative methods of allocating damages in antitrust litigation which will discourage sham suits, yet effectively deter antitrust violations. In this context, the views of the Senate Judiciary Committee, the ABA, and the commentators opinions<sup>23</sup> in favor of contribution and claim reduction should be broadly interpreted as a belief that the antitrust laws need some adjustment.

## II. A. GAME THEORETIC ANALYSIS OF CONTRIBUTION AND CLAIM REDUCTION

This section applies elementary concepts of game theory to analyze settlement pressure in private antitrust suits under four different liability rules. A basic distinction in game theory is made between zero-sum games, where the sum of the gains and losses is zero, and non-zero-sum, or potentially cooperative, games.<sup>24</sup> A wa-

*Suits—The Twenty-Third Annual Antitrust Review*, 71 COLUM. L. REV. 1, 9 (1971).

<sup>22</sup> In the early 1960's, private antitrust suits averaged around 300 per year (exclusive of 2,000 or more suits resulting from the electrical equipment conspiracy, most of which were filed in 1962). In the late 1970's, private antitrust suits exceeded 1,200 per year. [1979] TRADE REG. REP. No. 410 (Nov. 5, 1979).

<sup>23</sup> Antitrust commentators disagree over whether the rights of plaintiffs should be expanded in the interests of deterrence, or whether the courts should adopt rules restricting the number of suits in order to conserve judicial resources and to prevent blackmail. *Compare* Cirace, *Price-Fixing, Privity, and the Pass-On Problem in Antitrust Treble-Damages Suits: A Suggested Solution*, 19 WILLIAM & MARY L. REV. 171 (1977) and Comment, *Damage Distribution in Class Actions: The Cy Pres Remedy*, 39 U. CHI. L. REV. 448 (1972) and Comment, *Mangano and Ultimate-Consumer Standing: The Misuse of the Hanover Doctrine*, 72 COLUM. L. REV. 394 (1972) and Comment, *Wrongs Without Remedy: The Concept of Parens Patriae Suits for Treble Damages Under the Antitrust Laws*, 43 S. CAL. L. REV. 570 (1970) (plaintiffs' rights should be expanded) with *Comegys, The Advantages and Disadvantages of a Class Suit Under New Rule 23 as Seen by the Treble Damage Defendant*, 32 A.B.A. ANTITRUST L.J. 271 (1966) and *Handler & Bleichman, Antitrust and the Consumer Interest: The Fallacy of Parens Patriae and a Suggested New Approach*, 85 YALE L.J. 626 (1976) and *Landes & Posner, Should Indirect Purchasers Have Standing to Sue Under the Antitrust Laws? An Economic Analysis of the Rule of Illinois Brick*, 47 U. CHI. L. REV. 602 (1979).

<sup>24</sup> R. LUCE & H. RAIFFA, *GAMES AND DECISIONS* chs. 4-6 (1957); A. RAPOPORT, *TWO PERSON GAME THEORY* chs. 7-9 (1966). Another basic distinction in game theory is between two-person and more than two-person games, called n-person games. A. RAPOPORT, *N-PERSON*

ger of a sum of money on a cut of a deck of ordinary playing cards is an example of a zero-sum game between two rational players. A lawsuit also can be thought of as a zero-sum game because what the plaintiff wins, the defendant loses. The crucial aspect of zero-sum games is that there is no incentive for cooperation between rational players. Two-person, zero-sum games are strictly adversary games.<sup>25</sup>

In a non-zero-sum, or potentially cooperative, game between two players, the outcome differs depending upon whether the players cooperate or compete. Direct negotiation may or may not be allowed, but if the players adopt a cooperative strategy, they may both profit.<sup>26</sup> For example, economists have long analyzed the duopoly problem: What is the equilibrium price in a market served by only two firms each selling an identical product?<sup>27</sup> Notwithstanding the assumption that each firm is a rational profit maximizer, there are a number of different and often intricate solutions to this problem depending upon how each firm thinks the other firm will react to its pricing policy, whether collusion is allowed, what knowledge the firm possesses, and whether the firms learn from experience. It is sufficient to say that the most profitable solution for both firms occurs when both charge the monopoly price and sell half the monopoly output.<sup>28</sup> This solution can be achieved through direct cooperation (collusion) or through rational recognition of interdependence by the two firms (parallel action or tacit collusion).<sup>29</sup> If the firms do not cooperate completely, that is, if they compete, both will be worse off in terms of the price and output. The essential point is that non-zero-sum games need not be

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GAME THEORY chs. 7-12 (1970). Because it achieves stronger insights and conclusions in a significantly simpler theoretical context, two-person game theory will be applied in this Article. For an elementary discussion of two-person zero-sum games, see J.D. WILLIAMS, *THE COMPLETE STRATEGIST* (1954).

<sup>25</sup> M. BACHARACH, *ECONOMICS AND THE THEORY OF GAMES* 7-8 (1977); M. SHUBIK, *STRATEGY AND MARKET STRUCTURE* 10-11 (1959).

<sup>26</sup> R. LUCE & H. RAIFFA, *supra* note 24, at chs. 5-6; A. RAPOPORT, *supra* note 24, at chs. 8-9.

<sup>27</sup> D. DEWEY, *MICROECONOMICS: THE ANALYSIS OF PRICES AND MARKETS* 273-80 (1975); M. SHUBIK, *supra* note 25, at chs. 4-5; W. VICKERY, *MICROSTATISTICS* 303-14 (1964). The original work on duopoly is A. COURNOT, *RESEARCHES INTO THE MATHEMATICAL PRINCIPLES OF THE THEORY OF WEALTH* (N.T. BACON trans. 1897).

<sup>28</sup> E.H. CHAMBERLIN, *THE THEORY OF MONOPOLISTIC COMPETITION* 224 (8th ed. 1962); F. MACHLUP, *THE ECONOMICS OF SELLERS COMPETITION* ch. 12 (1952); E. MANSFIELD, *MICROECONOMICS* 333-46 (3d ed. 1979).

<sup>29</sup> E. MANSFIELD, *supra* note 28, at 338.

strictly adversary games; there are strategies for cooperation as well as competition.

### *The Prisoner's Dilemma Model*

The duopoly problem is actually a more complex version of a well known non-zero-sum game called the Prisoner's Dilemma.<sup>30</sup> As its name implies, the Prisoner's Dilemma game is modeled on an age-old interrogation technique. Two suspects are interrogated by police in different rooms so that they cannot communicate with each other. If one informs on the other as the price of plea bargaining, and the other does not inform, the informer goes free and the other is sentenced to ten years; if each informs on the other, both get reduced sentences of five years; if neither of them informs on the other, they are each sentenced to one year for illegal possession of a weapon. The rational strategy for each suspect is to inform on the other. The reason is that although the outcome in which both suspects do not inform (-1, -1) is better for both than is the outcome in which both inform (-5, -5), it is unstable; there is always a temptation for one player to double cross the other, bargain for immunity, and go free. The dilemma lies in that when both suspects play it safe by confessing, they end up worse than had they trusted each other and both not confessed.

A formal statement of the Prisoner's Dilemma is as follows: Two rational players are assumed to choose between two strategies, either to inform or not to inform on the other. In GAME MATRIX ONE, the first number in any cell is the sentence of Player A, the second number is the sentence of Player B. For example, if Player A adopts a Not Inform strategy, and Player B adopts an Inform strategy, Player A is sentenced to 10 years and Player B goes free.

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<sup>30</sup> R. LUCE & H. RAIFFA, *supra* note 24, at 94; A. RAPOPORT, *supra* note 24, at 128-32. The Prisoner's Dilemma is simpler than the duopoly problem. There are fewer possible solutions due to the assumptions that each player has only two strategies (inform or not to inform), and that each player has perfect knowledge of all the bargaining possibilities. In addition, the game will be played only once, so that learning from experience is impossible. However, game theorists also have analyzed the Prisoner's Dilemma on the assumption that it is played more than once by the same players. S. BRAMS, *GAME THEORY AND POLITICS* 32-33 (1975).

		Player B		
		Not Inform	Inform	
Player A	Not Inform	-1, -1	-10, 0	PRISONER'S DILEMMA
	Inform	0, -10	-5, -5	

GAME MATRIX ONE

*Liability Rule One: No Contribution*

The Prisoner's Dilemma game can be used to model settlement pressure between plaintiffs and defendants in private antitrust suits. Assume a treble damage suit with joint and several liability in which a plaintiff has chosen to sue two defendants. Although this is a zero-sum game from the point of view of plaintiffs against defendants, once the possibility is raised that one of the defendants may improve his position in relation to the other by settling with the plaintiff first, the bargaining posture between the defendants is recognized as that of the Prisoner's Dilemma. Unlike the simple interrogation case, however, three settlement strategies are possible for each defendant: (1) a defendant can attempt to cooperate and settle together with the other defendant, a Settle Together strategy; (2) a defendant can attempt to settle before the other defendant, a Settle First strategy; or (3) a defendant can attempt to settle only if the other defendant settles, a Settle Second strategy.

The outcomes associated with the several strategies are represented in GAME MATRIX TWO. The first number in any cell represents the "payoff" or settlement which Defendant A would pay to the plaintiff; the second number represents the amount Defendant B would pay to the plaintiff.

		Defendant B		
		Settle Together	Settle First	Settle Second
Defendant A	Settle Together	1, 1	2 $\frac{1}{8}$ , $\frac{7}{8}$	1 $\frac{1}{2}$ , 1 $\frac{1}{2}$
	Settle First	$\frac{7}{8}$ , 2 $\frac{1}{8}$	1 $\frac{1}{4}$ , 1 $\frac{1}{4}$	$\frac{7}{8}$ , 1 $\frac{3}{4}$
	Settle Second	1 $\frac{1}{2}$ , 1 $\frac{1}{2}$	1 $\frac{3}{4}$ , $\frac{7}{8}$	1 $\frac{1}{2}$ , 1 $\frac{1}{2}$

GAME MATRIX TWO

For example, the numbers in the lower right cell of GAME MATRIX TWO (1 $\frac{1}{2}$ , 1 $\frac{1}{2}$ ) indicate that if both defendants adopted a strategy of attempting to Settle Second, there would be no settlement and, after trial, each would pay half of the treble damages. The same reasoning applies to the lower left and upper right cells, since if one defendant adopts a Settle Together strategy and the other adopts a Settle Second strategy, there will be no settlement.

It is assumed that the defendants would have the greatest total bargaining power if they bargained as a unit and settled together; thus the upper left cell has the lowest payoffs or settlements (1,1).<sup>31</sup> If one defendant adopts a Settle First strategy and the other adopts either a Settle Together or a Settle Second strategy, the defendant who settles first will be able to achieve the most favorable settlement, but not so favorable as if it had negotiated as a unit with the other defendant. It is assumed, therefore, that it settles for  $\frac{7}{8}$ .<sup>32</sup> With joint and several liability, when one defendant settles, the other defendant is potentially liable for the difference between the payoff which the plaintiff would receive from successfully litigating its claims, which is given an assumed value of 3, and the amount previously paid by the settling defendant—stated arithmetically,  $3 - \frac{7}{8} = 2\frac{1}{8}$ . Even though the nonset-

<sup>31</sup> See *Zenith Radio Corp. v. Hazeltine Research, Inc.*, 401 U.S. 321, 346-48 (1971); *Flintkote Co. v. Lysfjord*, 246 F.2d 368 (9th Cir.), cert. denied, 355 U.S. 835 (1957).

<sup>32</sup> The choice of  $\frac{7}{8}$  as the payoff or settlement of the defendant who settles first, as opposed to some other number, is arbitrary. Only the magnitude of the payoff relative to other payoffs is significant. "Game theoretical conclusions, like all mathematical conclusions, are based on givens and on the assumption that these givens can be somehow made known. The given payoffs are assumed to reflect the psychological worth of the associated outcomes to the player in question. The task of determining these psychologically meaningful payoffs is the task of the psychologist, not of the game theoretician." A. RAPOPORT, *supra* note 24, at 24. Thus, the magnitude of the payoff relative to other payoffs, rather than the amount assigned to each payoff, is significant.

ting defendant would lose  $2\frac{1}{8}$  if it went to trial and lost, we will assume that the plaintiff would agree to a concession of  $\frac{3}{8}$  in order to forego the time and effort of trial and, therefore, the defendant who settles second will pay out  $1\frac{3}{4}$ . Thus, if one defendant adopts a Settle First strategy, and the other adopts a Settle Second strategy, the payoff will be  $\frac{7}{8}$ ,  $1\frac{3}{4}$ .

If both defendants adopt a Settle First strategy, the plaintiff will know that defendants are eager to settle and will extract more than if defendants would only Settle Together (1,1), but less than the full treble damages a trial would produce ( $1\frac{1}{2}$ ,  $1\frac{1}{2}$ ). Therefore, it is assumed that if both adopt a Settle First strategy, the payoff is  $1\frac{1}{4}$ ,  $1\frac{1}{4}$ . Finally, if one defendant adopts a Settle First strategy and the other adopts a Settle Together strategy, the defendant who settles first will pay  $\frac{7}{8}$  for reasons given above, and the defendant who adopts a Settle Together strategy will not be able to settle. After trial, the nonsettling defendant will pay  $2\frac{1}{8}$ —the difference between the total damage verdict and the amount previously received in settlement.

Although in slightly more complicated form, this settlement game is still a Prisoner's Dilemma. If each defendant is rational and cannot be completely sure that the other defendant will agree to, and not defect from, a Settle Together strategy, each will attempt to settle first. If a defendant attempts to settle first, the least it will pay is  $\frac{7}{8}$ , and the most  $1\frac{1}{4}$ . If it does not settle first, it may pay as little as 1 if the defendants settle together. Given the settlement pressure and the self-interest of each defendant, however, it is more likely that the defendant who chooses not to settle first will pay between  $1\frac{1}{2}$  and  $2\frac{1}{8}$ . Moreover, the pressure to settle first becomes greater as the number of defendants increases and the amount of total damages becomes potentially greater.<sup>33</sup>

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<sup>33</sup> The difficulties faced by settling defendants are typified by the situation in *In re Corrugated Container Antitrust Litigation*, 84 F.R.D. 40 (S.D. Tex.), *aff'd mem.*, 606 F.2d 319 (5th Cir. 1979), *cert. dismissed*, 49 U.S.L.W. 3281 (U.S. Oct. 21, 1980). That case, a price-fixing suit, involved some 50 private class actions, brought against 37 companies representing roughly 70% of the container market. The Senate Committee pointed out that "because of the large number of defendants and the disparity in the size, market share, and involvement in the alleged conspiracy, no sharing agreement existed. This, combined with the unavailability of contribution, made possible a classic example of what one witness called the whipsaw 'game theory' in application." *Hearings on S. 1468, supra* note 6, at 14. The plaintiffs' strategy was to induce settlement by negotiating "discount" rates with those who settled first. *Id.* Plaintiffs settled with the first defendant at \$500,000 per percentage point of market share, and the second at \$1 million per point. Because the latter defendant had an 8.3% market share, the sum deducted from the potential liability facing the other 35

If contribution and claim reduction replace joint and several liability without contribution, it would seem that the effect is merely to change the lawsuit from one zero-sum game to several zero-sum games. That is, claim reduction transforms the lawsuit into a strictly adversary relationship between the plaintiff and each defendant because the possibility of cooperation between the plaintiff and one defendant at the expense of the other is removed. Claim reduction, therefore, alters the bargaining relationship in favor of the defendants. Moreover, the defendants' position is further enhanced under this scheme because the cost of potential trial is a joint cost and, therefore, it is impossible to separate totally the effect which one defendant's settlement has on another defendant.

### *The Chicken Game Model*

Whereas the no contribution rule puts the defendants in a Prisoner's Dilemma and gives each a great incentive to settle first, claim reduction encourages each defendant to settle last. This alteration in settlement pressure can be modeled by the following paradigm, known as the Chicken Game.

Assume that two automobiles start at opposite ends of a straight track. The object is to reach the other's point of origin first. If they do not cooperate, and each insists on staying in the center of the track, a crash results. If they do cooperate—each passes the other on the right as they approach—there is a draw. But, if one intimidates the other by threatening to crash, thereby forcing the other to concede it the center of the track, the intimidator will win the race. A formal statement of the Chicken Game is presented in GAME MATRIX THREE.<sup>34</sup>

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defendants was only \$8.3 million, far short of the \$50-250 million traceable to the second-settling defendant's own sales. This increased the settlement pressure on other defendants, who then faced rising rates of \$2 million a point and upward. Some later settling defendants paid as much as \$6.5 million a point. *Id.* For examples of settlement pressures in other antitrust litigations, see *id.*, at 16.

<sup>34</sup> S. Brams, *supra* note 30, at 39-47; A. RAPOPORT, *supra* note 24, at 137-42.



		Player B		
		Cooperate	Do Not Cooperate	
Player A	Cooperate	0, 0	-2, 2	CHICKEN GAME
	Do Not Cooperate	2, -2	-5, -5	

GAME MATRIX THREE

The Chicken Game resembles the Prisoner's Dilemma in that both players will be better off if they adopt cooperative rather than noncooperative strategies. Moreover, in both games, the players are tempted to defect from the cooperative outcome. There are, however, two distinct differences between the games. First, the worst outcome in the Chicken Game occurs when both players do not cooperate. This is the next to worst outcome for both players in Prisoner's Dilemma, the worst occurring to the player who cooperates with the other (does not inform) when his opponent does not cooperate (informs). The major distinction between the two games is that there is a dominant strategy in the Prisoner's Dilemma, but not in the Chicken Game. A dominant strategy exists when there is a best strategy which a player can adopt regardless of the strategy the other player adopts.<sup>35</sup> In the Prisoner's Dilemma, as shown above, the dominant strategy is to inform on the other prisoner. Consider both cases: a player should inform if it knows the other player will also inform so as to reduce its sentence from 10 to 5 years; this player should also inform if it knows the other will not inform so as to reduce its sentence from 1 year to no sentence at all. In the Chicken Game, there is no dominant strategy. A Do Not Cooperate strategy is the best answer to the other player's Cooperate strategy so as to increase the payoff from 0 to 2, whereas a Cooperate strategy is the best answer to the other player's Do Not Cooperate strategy so as to increase the payoffs from -5 to -2.<sup>36</sup>

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<sup>35</sup> *Id.*, at 55; R. LUCE & H. RAIFFA, *supra* note 24, at 79.

<sup>36</sup> In terms of the verbal paradigm, if one player knows that the other will not chicken out, that is, would crash rather than leave the center of the road, then the first player should chicken out, that is, leave the center of the road. But, if one player knows that the other will chicken out, that player should remain in the center of the road. On the other hand, in the Prisoner's Dilemma, a player should always inform on the other, regardless of whether the other chooses an Inform or Not Inform strategy.

*Liability Rule Four: Contribution and Claim Reduction*<sup>37</sup>

In GAME MATRIX FOUR, the effect of contribution and claim reduction on a treble damage suit involving two defendants and their three settlement strategies is analyzed. For the purpose of the model, we assume that the plaintiff sued two defendants, Defendant A and Defendant B.

		Defendant B		
		Settle Together	Settle First	Settle Second
Defendant A	Settle Together	1, 1	1 ½, 1 ¼	1 ½, 1 ½
	Settle First	1 ¼, 1 ½	1 ¼, 1 ¼	1 ¼, ⅞
	Settle Second	1 ½, 1 ½	⅞, 1 ¼	1 ½, 1 ½

GAME MATRIX FOUR

The four corner cells and the center cell—the cells on the two diagonals—have the same payoffs as those in the corresponding cells in GAME MATRIX TWO and are based on the logic of the Prisoner's Dilemma game. The remaining four cells are different. If Defendant A follows a Settle First strategy, and Defendant B follows a Settle Second strategy, the plaintiff will not be as eager to make concessions to the defendant who settles first as it would under the no-contribution rule because (1) it knows that settling with one defendant will not put more pressure on the other defendant to settle—the liability of the remaining defendant does not increase because the plaintiff settled with the other; and (2) once the plaintiff settles with Defendant A, both the plaintiff and Defendant B know that whether a trial takes place depends solely on whether they settle. Therefore, Defendant B is in a better bargaining position than Defendant A who settled first. Thus, under a claim-reduction rule, it is likely that the plaintiff will expect to receive more from the first defendant who settles and less from the second defendant who settles after the shift in settlement pressure. Under claim reduction, the plaintiff is assumed to receive 1 ¼, ⅞

<sup>37</sup> The liability rules are discussed out of sequence for expository convenience. Rule One is an extreme in the sense that it favors plaintiffs excessively; Rule Four favors defendants excessively. After defining the extremes, intermediate Rules Two and Three, which attempt to balance settlement pressure more equitably, are discussed.

from the first and second settlements respectively, as opposed to  $\frac{7}{8}$ ,  $1\frac{3}{4}$  under the no-contribution rule. If one defendant adopts a Settle First strategy and the other adopts a Settle Together strategy, the defendant who adopts the Settle First strategy will pay  $1\frac{1}{4}$  for the reasons given above; the defendant who adopted a Settle Together strategy will not be able to settle and, assuming it loses the trial, will pay the maximum amount under claim reduction,  $1\frac{1}{2}$ .

What settlement strategy should be followed under claim reduction? Unlike the Prisoner's Dilemma in which there is a dominant strategy (always settle first) claim reduction results in a Chicken Game with no dominant strategy—there is no one strategy which is best to follow no matter what strategy the other defendant adopts. In the antitrust setting, however, the defendants could consistently adopt a dual strategy of either settle together or settle second, but do not settle first. If one defendant settles first because the trial date is approaching and it has not prepared its case, it pays  $1\frac{1}{4}$ , whereas the defendant who settles second pays only  $\frac{7}{8}$ . If neither defendant turns "chicken," the result is either a settlement together, in which case they pay 1 and 1 respectively, or a trial, which if they lose, they each pay  $1\frac{1}{2}$ . Of course, the more defendants there are, the greater the leverage wielded by those who settle later and last.

In short, under a no-contribution rule there is a powerful incentive to settle first due to the Prisoner's Dilemma, whereas under a claim reduction liability rule, there is a powerful incentive to settle last due to the Chicken threat.

#### *Liability Rule Two: No Contribution Modified by Minimum Settlements*

In the following subsections, legal rules are suggested which will adjust the settlement pressure between plaintiffs and defendants in a fairer manner than results under a no-contribution rule (Prisoner's Dilemma) or under contribution and claim reduction (Chicken Game). These rules are based upon minimum or pattern settlements which are described as follows: Once a plaintiff makes a settlement with any defendant, the remaining defendants would be given a one-time opportunity of accepting the terms of this minimum settlement,<sup>38</sup> adjusted for market shares when possible,

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<sup>38</sup> See *Alabama v. Blue Bird Body Co.*, No. 75-23-N, slip op. at 4 (M.D. Ala. May 19,

or in the alternative pro rata,<sup>39</sup> or risk subsequent settlement or trial with the attendant risk of paying more than their proportionate share of damages. That is, if defendants refuse the minimum settlement, they will face the same settlement pressure induced under the no-contribution rule (Prisoner's Dilemma). To prevent collusion between the plaintiff and a defendant concerning the terms of the minimum settlement, if subsequent settlements contain more favorable terms, all defendants who agreed to the minimum settlement should receive the more favorable terms. Thus, all defendants will have a one-time opportunity to accept the most favorable or minimum settlement terms.<sup>40</sup>

Liability Rule Two has two advantages. First, this rule is superior to strict joint and several liability where no contribution is permitted because it does not allow plaintiffs to favor any defendants at the expense of other defendants. Second, this rule is superior to claim reduction because it retains most of the settlement pressure of strict joint and several liability and does not give de-

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1979).

<sup>39</sup> If contribution is adopted in antitrust suits in which price fixing is alleged, treble damages or claim reduction should be apportioned on the basis of market shares. For example, in *In re Corrugated Containers Antitrust Litigation*, 84 F.R.D. 40 (S.D. Tex.), *aff'd mem.* 606 F.2d 319 (5th Cir. 1979), *cert. dismissed*, 49 U.S.L.W. 3281 (U.S. Oct. 21, 1980), the estimated amount of treble damages was one billion dollars and the market shares of the thirty-seven defendants ranged from .375% to 8.56%. 84 F.R.D. at 41. If a billion dollar damage award were apportioned equally among the thirty-seven defendants on a pro rata basis, each firm would pay approximately thirty million dollars. On a market share basis, the firm with the smallest share of the market would pay \$3.75 million, whereas the company with the largest share would pay \$85.6 million. *Id.* Thus, in the *Corrugated Containers* example, if a pro rata criterion were used instead of a market share criterion, the firm with the largest market share would avoid approximately 55 million dollars in damages and the firm with the smallest market share would be liable for approximately 26 million dollars in additional damages. Under pro rata contribution, therefore, firms with larger market shares would be deterred less than firms with the small market shares since the former would avoid much of the liability attributable to their own illegal acts. 29 CATH. L. REV., *supra* note 8, at 688-89.

On the other hand, if contribution is to be allowed in suits such as *Professional Beauty Supply v. National Beauty Supply*, 594 F.2d 1179 (8th Cir. 1979), in which the plaintiff, a wholesaler-dealer of cosmetic products alleged that a competitor conspired with a manufacturer of beauty supplies to terminate the plaintiff and grant an exclusive franchise to the competitor in violation of section 2 of the Sherman Act, 15 U.S.C. § 2 (1976), it must be on a pro rata basis because courts will be reluctant to apportion damages according to relative guilt and because there is no objective method to apportion damages.

<sup>40</sup> The Federal Rules of Civil Procedure presently require judicial approval of proposed settlement agreements in class action litigation. FED. R. CIV. P. 23(e). If this rule were expanded to require judicial approval in all treble damage antitrust litigation, the courts could easily apply the pattern setting settlement rule suggested in the text.

defendants an incentive to settle last.

*Liability Rule Three: Rule Two With a Right to Contribution Equal to the Minimum Settlement*

Liability Rule Three is Rule Two plus a right to contribution against nondefendant violators equal to the minimum or pattern settlement. Under Rule Three, defendants who are liable for more than the pattern settlement would have a right to contribution for the excess from nondefendant violators who would be liable up to the pattern settlement. Rule Three, while similar to Rule Two, is more advantageous to defendants in that it prevents plaintiffs from favoring any antitrust violators who have injured the plaintiff, not just those violators the plaintiff chooses to sue as defendants as in Rule Two. Rule Three places less settlement pressure on defendants than Rule One or Two, but does not reduce it as much as Rule Four.

Either Rule Two or Rule Three will adjust settlement pressure more fairly than Rules One or Four and are, therefore, preferable.<sup>41</sup> The choice between these two intermediate liability rules depends, however, upon how one weighs the unfairness of allowing the entire burden of compensatory and punitive damages to be placed upon one of several joint tortfeasors—because of the plaintiff's whim, spite, or collusion with other violators—against the chilling effect on commencements of meritorious actions due to the dangers of increased complexity, the plaintiff's loss of control through multiple third-party actions seeking contribution,<sup>42</sup> and the reduction in the deterrent power of the antitrust laws discussed in Section I.

### CONCLUSION

The Prisoner's Dilemma model has shown that prohibiting contribution among antitrust violators unduly favors plaintiffs be-

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<sup>41</sup> The four liability rules are ordered from the most favorable to plaintiffs, Rule One, to the least favorable to plaintiffs, Rule Four.

<sup>42</sup> Although district court judges' power to sever issues and parties may allow them to manage the increased complexity and prevent plaintiffs from losing control of the case due to a defendant's impleading of multiple parties to seek contribution, *Professional Beauty Supply v. National Beauty Supply*, 594 F.2d 1179, 1184-85 (8th Cir. 1979), the mere possibility of increased complexity could have a chilling effect on an injured party's incentive to bring a meritorious action. *Id.* at 1189-90; (Hanson, J., dissenting); see *Wilson P. Abraham Constr. Corp. v. Texas Indus., Inc.*, 604 F.2d 897, 905-06 (5th Cir. 1979), *cert. granted sub nom. Texas Indus., Inc. v. Radcliff Materials, Inc.*, 101 S. Ct. 351 (1980).

cause it places too much pressure on individual defendants to settle *first* and at the expense of the other defendants. In other words, this liability rule exacerbates the blackmail problem.<sup>43</sup> On the other hand, the Chicken Game model has demonstrated that contribution and claims reduction is too favorable to defendants because it gives them an incentive to wait and settle *last* at the expense of the other defendants. That is, claim reduction significantly reduces the deterrent effect of the treble damages provision.<sup>44</sup> Finally, two intermediate liability rules based on minimum or pattern settlements have been examined and shown to be more equitable in balancing settlement pressures among the parties. Which of these two rules is actually preferable, however, depends upon several factors. Although some have argued that plaintiffs choose not to sue more than one defendant out of fear of the economic power of the unnamed violators,<sup>45</sup> there are indications that plaintiffs may be more inclined to overinclusiveness rather than underinclusiveness in naming defendants.<sup>46</sup> An additional consideration is the reduction in the deterrent effect of the antitrust laws which would result should more plaintiffs of smaller means decline to engage in private antitrust actions because of the increased complexity caused by freely allowing third-party complaints for contribution.

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<sup>43</sup> See notes 20-21 and accompanying text *supra*.

<sup>44</sup> See notes 14-17 and accompanying text *supra*.

<sup>45</sup> See *Wilson O. Abraham Constr. Corp. v. Texas Indus., Inc.*, 604 F.2d 897, 901 (5th Cir. 1979), *cert. granted sub nom. Texas Indus., Inc. v. Radcliff Materials, Inc.*, 101 S. Ct. 351 (1980); *Professional Beauty Supply v. National Beauty Supply*, 594 F.2d 1179, 1185 (8th Cir. 1979); *Delone*, *supra* note 8, at 685.

<sup>46</sup> See *Hearings on S.1468 supra* note 6, at 67 (prepared testimony of Donald G. Kempf, Jr.).