1997

Class Action Chaos? The Theory of the Core and an Analysis of Opt-Out Rights in Mass Tort Class Actions

Michael A. Perino
St. John's University School of Law

CLASS ACTION CHAOS? THE THEORY OF THE CORE AND AN ANALYSIS OF OPT-OUT RIGHTS IN MASS TORT CLASS ACTIONS

*Michael A. Perino**

From breast implants to cigarettes, mass tort class actions are a prominent and controversial part of the contemporary litigation landscape. A critical component of these actions is the ability of class members to "opt out" and thereby exclude themselves from the effect of any class judgment. The tension between individual autonomy and the desire for global resolution of mass controversies has led to an intense debate concerning the circumstances under which opt-out rights should be constrained, if at all.

This Article makes five distinct contributions to the class action literature. First, the Article applies the game theoretic concept of the "core" to class action litigation. Core theory describes the conditions under which coalitions tend to be stable and provides a ready analogue to class litigation. The Article next demonstrates that global class resolutions often require that litigants' bargaining strategies, including opt-out rights, be constrained in order to create a core. Third, the Article demonstrates that opt-out rights often do not serve their intended purpose and can act primarily to frustrate the resolution of complex claims. Fourth, the Article proposes the conjecture that a core theoretic model, while simplified and reductionist, is sufficiently robust to generate essentially all of the problems observed in class litigation. Agency and other problems that have been at the heart of much class action scholarship certainly exist, but may not be analytically essential to an explanation of observed settlement and litigation patterns. Finally, core theory highlights an inherent paradox in class actions. In cases where claims for individual autonomy are strongest, opt-out rights are powerful bargaining tools that can destroy class actions and dramatically shift power within classes. In classes with traditionally weaker claims for preserving individual autonomy, opt-out rights may be both unnecessary and unlikely to disrupt class-wide resolutions. The recognition of opt-out rights in cases where it is feasible for litigants to exercise them can thus destroy the effectiveness of the class mechanism that serves as the foundation for those rights in the first instance. Individual autonomy may thus be fun-

---

* Lecturer, Stanford Law School; Deputy Director, Roberts Program in Law and Business.

The author would like to thank Joseph Grundfest and Randall Thomas for their comments on an earlier draft of this Article. All errors are, of course, my own.

damentally incompatible with obtaining global resolution in mass tort and other kinds of class actions.

TABLE OF CONTENTS

I. INTRODUCTION

Class action litigation has reshaped the notion of "justice" in American courts. A wide category of claims once perceived as beyond the reach of the judiciary now seeks to impose liability running into the hundreds of billions of dollars for the benefit of tens of millions of potential claimants. These claims raise a broad set of social, economic, and policy concerns. They span issues as diverse as the addictive qualities of cigarette smoking, damage caused by asbestos, the health risks of breast implants and other medical devices, the spread of AIDS, the use of Agent Orange in the Vietnam War, and the safety of various automobile designs. The mere pendency of a mass tort class action has driven otherwise profitable enterprises to declare bankruptcy. Concern over potential litigation may have kept many products out of United States markets.

The rapid growth of the class action mechanism has been accompanied by an outpouring of judicial, scholarly, and popular commentary analyzing a dizzying array of related concerns. Central to much of the debate is the tension between a litigant's individual autonomy and the necessity to employ collective procedures in mass litigation.[1] That tension is often addressed through the mechanism of the "opt-out" right, which provides individual class members with a choice between proceeding as members of a class who will be bound by a class-wide settlement or "opting out" of the class and pursuing their claims through individual adjudication.[2] Many scholars and judges rec-

---

[1] *See* Robert L. Rabin, *Continuing Tensions in the Resolution of Mass Toxic Harm Cases: A Comment*, 80 CORNELL L. REV. 1037, 1040-42 (1995).

[2] The Supreme Court has granted certiorari in at least two cases this Term that involve these inherent tensions in the application of the class action mechanism to mass tort cases. In the first case, *Adams v. Robertson*, 676 So. 2d 1265 (Ala. 1995), *cert. granted*, 117 S. Ct. 37 (1996), the Court granted certiorari to examine whether an Alabama state court's certification of a class action and approval of a settlement violated the Due Process Clause of the Fourteenth Amendment because class members had not been afforded the ability to opt out of either the class or the settlement. The Supreme Court never reached the merits in *Adams*. On March 3, 1997, it dismissed the writ of certiorari as improvidently granted because the Alabama Supreme Court had not addressed this issue in its opinion. Adams v. Robertson, No. 95-1873, 1997 U.S. LEXIS 1490 (Mar. 3, 1997).

The Court also granted certiorari to review the Third Circuit's decision to overturn certification of a "futures only" settlement class action in an asbestos mass tort case, i.e., a settlement that purported to resolve claims of parties who had been exposed to asbestos but who had not yet filed suit. *See* Georgine v. Amchem Prods., Inc., 83 F.3d 610 (3d Cir.), *cert. granted sub. nom.* Amchem Prods, Inc. v. Windsor, 117 S. Ct. 379 (1996). In a settlement class, a complaint, a request for class certification, and a proposed settlement are filed contemporaneously. The Supreme Court granted certiorari to review the Third Circuit's

ognize that the individualized model of litigation makes little sense in mass tort cases alleging injuries to thousands or even millions of people, but also believe that opt-out rights serve important instrumental and symbolic roles in mass litigation.[3]

This Article re-examines this debate through the lens of game theory and the concept of "core." Core theory describes the conditions under which coalitions will or will not tend to be stable and thus provides a ready analogue to class litigation. A game has a "core" when there is a strategy that all the coalition members are willing to follow because that strategy is more profitable than the returns that could be captured by any sub-coalition that can credibly threaten to defect. As demonstrated in greater detail below, even a highly reductionist, three-person bargaining model is able to generate results which capture many of the real-life complexities of class action litigation. The model demonstrates that class action litigation often cannot be resolved until the litigants' bargaining space is sufficiently constrained so as to create a core when there might not otherwise be one. Viewed from this perspective, the name of the game in achieving global resolution of mass litigation is crafting a resolution mechanism that forces a consensus on claimants who have no natural incentive to cooperate with each other because they are arguing over the division of a fixed pie. The model also demonstrates that many of the claims made for preserving opt-out rights are flawed because opt-outs often do not serve their intended purpose.

---

determination that a court may certify a settlement class only if the case would satisfy the requirements for class certification under Federal Rule of Civil Procedure 23(a) even if there were no settlement and the case was to be litigated. *See Georgine*, 83 F.3d at 624-26. *Georgine* raises broader issues, however, that go to the heart of the tension between individualized adjudication and collective processing because the settlement purported to resolve the claims of between 250,000 to two million people, many of whom had not even manifested any symptoms from asbestos exposure at the time of the settlement. Among the significant questions this kind of settlement raises are whether any meaningful notice can be provided to such claimants, whether these claimants had a meaningful opportunity to opt out of the settlement, whether settlement classes encourage collusive settlements or attorney opportunism, and whether a court approving a settlement of such claims is straying from the limited role of the judiciary and usurping the role of a legislature. When this Article went to press, the Supreme Court had not yet rendered a decision in *Georgine*.

As discussed more fully in the remainder of the Introduction, the primary focus of this Article is not to address the settlement class mechanism, but rather to provide a theoretical framework for understanding the bargaining strategies and problems that can arise from the grant or denial of opt-out rights in mass tort cases. In addressing these issues, the Article discusses both *Georgine* and some of the issues settlement class actions raise. *See infra* notes 81-85, 225-35, and 305-06 and accompanying text.

[3] *See infra* notes 64-66 and accompanying text.

Indeed, the core theoretic model is sufficiently robust that this Article tentatively asserts a "core completeness conjecture"—that core theory can explain many if not all of the problems and phenomena observed in class actions. This conjecture stands in contrast to much of the class action scholarship of the last decade, which has relied heavily on agency problems, market failure, or other procedural imperfections. While these problems certainly exist in class litigation, they can be encompassed within the broader core theoretic model. For this reason, the concept of core can serve as an exceedingly valuable organizing principle for the analysis of class action litigation and settlement dynamics.

Finally, core theory highlights an inherent paradox in class action litigation. Claims for preserving individual autonomy in class actions vary in strength depending on the nature of the underlying claims at issue. Cases in which claims for individual autonomy are typically strongest, such as many mass tort cases, are likely to be the most unstable because they are likely to have the greatest frequency of opt-outs. Opt-out rights in these cases can act as powerful bargaining tools that can destroy class actions and dramatically shift power within them. By contrast, in cases with traditionally weaker claims for preserving individual autonomy, opt-outs are unnecessary because they are unlikely to perform any instrumental function. At the same time, they are also unlikely to disrupt class-wide resolutions because few claimants are likely to invoke them. The upshot of core theoretic analysis is that the recognition of opt-out rights in cases where they can be feasibly exercised can destroy the effectiveness of the class mechanism that serves as the foundation for those rights in the first place. The entire notion of class action litigation with extensive opt-out rights may thus suffer from the fundamental paradox that litigative autonomy is often incompatible with the resolution of aggregative claims.

These topics are analyzed in five parts. Part II provides a brief history of mass tort cases, with a particular emphasis on the treatment of opt-out rights. Part III describes the scholarly commentary relevant to opt-outs and the game theoretic concept of core that to date has been missing from that commentary. Part IV describes a simple core theoretic model of class actions. This Part demonstrates how bargaining strategies can be constrained to form a core. The Part also analyzes the effects opt-outs can have on other class members and on the prospects for successful aggregative resolutions. Part V provides some real-world analogues that are consistent with core theory and suggests that core theory is sufficiently robust to encompass all observed class action

phenomena. Finally, Part VI discusses the legal implications of a core theoretic analysis of class actions.

II. A BRIEF HISTORY OF MASS TORT CLASS ACTIONS

Mass tort class actions have evolved through four phases.[4] In each phase, courts have wrestled with a desire to employ aggregative techniques in mass tort litigation while still respecting individual autonomy. Each phase is marked by a different resolution of that problem. In the first phase, courts routinely denied class certification motions due to a concern that individual issues would overwhelm common ones.[5] In the second phase, courts experimented with class certification and relied on the opt-out mechanism to justify this aggregative technique.[6] In the third phase, courts recognized that opt-outs often made efficient global resolution and settlement of class actions difficult and turned to Rule 23(b)(1) mandatory classes, only to discover that the appellate courts would rebuff this solution.[7] Finally, in the fourth phase, appellate courts have reasserted their strong concerns about whether the class action device is appropriate in mass tort cases.[8] Thus, courts are now often

---

[4] The real world of course tends to resist historical categorization. Although one can in fact discern four phases of mass tort class action evolution, those phases are by no means temporally distinct. One can find early evidence of later trends and a significant overlap between evolutionary phases. Nonetheless, this four-phase evolutionary cycle is, at a minimum, a useful pedagogical construct. Other commentators also view this history in the same evolutionary terms. *See* John C. Coffee, Jr., *Class Wars: The Dilemma of the Mass Tort Class Action*, 95 COLUM. L. REV. 1343, 1344, 1355-58 (1995) [hereinafter Coffee, *Class Wars*]. In particular, Professor Schuck describes the change in judicial attitude as "institutional evolutionism," which he characterizes as judges' incremental building of systems for efficiently processing mass torts through a common law approach that chooses among competing institutional designs. Peter Schuck, *Mass Torts: An Institutional Evolutionist Perspective*, 80 CORNELL L. REV. 941, 944 (1995). Perhaps the best characterization of the historical record comes from Professor Yeazell, who noted that "[a] legal culture uncertain about the role of individualism and the desirability of collectivization demonstrates its uncertainty in halting, sideways moves toward collectivization and in large compensating gestures toward individualization." Stephen Yeazell, *Collective Litigation as Collective Action*, 1989 U. ILL. L. REV. 43, 55-56.

For additional views of the history of mass tort actions, see John C. Coffee, Jr., *The Regulation of Entrepreneurial Litigation: Balancing Fairness and Efficiency in the Large Class Action*, 54 U. CHI. L. REV. 877 (1987) [hereinafter Coffee, *Entrepreneurial Litigation*]; Deborah R. Hensler & Mark A. Peterson, *Understanding Mass Personal Injury Litigation: A Socio-Legal Analysis*, 59 BROOK. L. REV. 961 (1993); Judith Resnik, *Aggregation, Settlement, and Dismay*, 80 CORNELL L. REV. 918 (1995); *see generally* JACK B. WEINSTEIN, INDIVIDUAL JUSTICE IN MASS TORT LITIGATION: THE EFFECT OF CLASS ACTIONS, CONSOLIDATIONS, AND OTHER MULTIPARTY DEVICES (1995).

[5] *See infra* notes 9-16 and accompanying text.

[6] *See infra* notes 17-31 and accompanying text.

[7] *See infra* notes 32-53 and accompanying text.

[8] *See infra* notes 54-63 and accompanying text.

denying class certification using rationales that are highly reminiscent of the first phase of mass tort class actions.

Courts have thus come full circle on the class action issue because they have proved unable to resolve the tension between the historical inclination to provide individualized justice and the need to employ effective aggregative techniques to settle these proceedings. Understanding this evolutionary cycle is important because the problems and difficulties this tension created all fit neatly into the basic principles of core theory. Those principles underlie any attempt to form a stable coalition, like a global class resolution. Indeed, it is because of the inability to resolve—and sometimes even to articulate—the problem of core that the law of class actions has experienced its circular evolution.

In the first phase of mass tort evolution the courts' most significant concern was whether class actions were ever appropriate in cases alleging significant personal injuries. Analysis of that question at first typically began and ended with consideration of the Advisory Committee notes to Rule 23(b)(3).[9] The Committee quite clearly contemplated that "mass accident" cases would not likely be amenable to class action treatment.[10] These admonitions were

---

[9] *See* cases cited *infra* note 14.

[10] The Advisory Committee note states:

> A "mass accident" resulting in injuries to numerous persons is ordinarily not appropriate for a class action because of the likelihood that significant questions, not only of damages but of liability and defenses of liability, would be present, affecting the individual in different ways. In these circumstances, a class action would degenerate in practice into multiple lawsuits separately tried.

FED. R. CIV. P. 23(b)(3) advisory committee's note to 1966 amendments (citing Pennsylvania R.R. v. United States, 111 F. Supp. 80 (D.N.J. 1953); Jack B. Weinstein, *Revisions of Procedure: Some Problems in Class Actions*, 9 BUFF. L. REV. 433, 469 (1960)); *see* Benjamin Kaplan, *Continuing Work of the Civil Committee: 1966 Amendments of the Federal Rules of Civil Procedure*, 81 HARV. L. REV. 356, 393 (1967). Interestingly, Judge Weinstein, one of the leading judicial proponents of mass tort class actions, has repudiated the *Buffalo Law Review* article the Advisory Committee cites. *See In re* Joint E. & S. Dist. Asbestos Litig., 129 B.R. 710, 806 (E. & S.D.N.Y. 1991) (Weinstein, J.), *vacated on other grounds*, 982 F.2d 721 (2d Cir. 1992), *modified*, 993 F.2d 7 (2d Cir. 1993); WEINSTEIN, *supra* note 4, at 135.

Arguably, this admonition about "mass accidents" may be read to apply only to airplane crashes or other single event disasters, and not to product liability cases, such as those involving asbestos, DES, or breast implants. *See* Spencer Williams, *Mass Tort Class Actions: Going, Going, Gone?*, 98 F.R.D. 323, 324 n.1 (1983). Many courts, however, have found that mass exposure cases are poorer candidates for class treatment than mass accident cases. *See, e.g., In re* American Med. Sys., Inc., 75 F.3d 1069, 1084-85 (6th Cir. 1996); Sterling v. Velsicol Chem. Corp., 855 F.2d 1188, 1196-97 (6th Cir. 1988); *In re* N. Dist. Cal. "Dalkon Shield" IUD Prods. Liab. Litig., 693 F.2d 847, 853 (9th Cir. 1982) [hereinafter *Dalkon Shield*]; Caruso v. Celsius Insulation Resources, Inc., 101 F.R.D. 530, 536 (M.D. Pa. 1984); Mertens v. Abbott Labs., 99 F.R.D. 38, 41-42 (D.N.H. 1983); Yandle v. PPG Indus., 65 F.R.D. 566, 571 (E.D. Tex. 1974).

consistent with Rule 23(b)(3)'s general focus on individuality. The notes to Rule 23(b)(3) indicate that cases that might have otherwise been susceptible to a collectivist approach (because of multiplicity of suits, common questions or the like) may be inappropriate for class certification because the putative class members may have an overriding interest in maintaining control over their own actions.[11] This view reflects the traditional notion that a strong system of litigative autonomy represents a preferred method for resolving some categories of cases, particularly tort cases.[12] Plaintiffs who have allegedly suffered severe personal injuries are entitled under this view to control their own litigation and to pursue a particularized adjudication through a trial against an individual defendant.[13]

Initially, most courts followed the Advisory Committee's views and largely denied class action treatment in any kind of mass tort case.[14] The importance

---

Moreover, some evidence suggests that the Advisory Committee sought to preclude entirely the use of class actions in mass tort cases. *See* Resnik, *supra* note 4, at 923; *but see* Castano v. American Tobacco Co., 84 F.3d 734, 745 n.19 (5th Cir. 1996) (quoting statement of Professor Wright, a member of the Advisory Committee, that no total ban was contemplated, but that the Committee viewed the class action as "a complex device that must be used with discernment").

[11] Any court evaluating whether to certify a class action under Rule 23(b)(3) should consider "the interests of members of the class in individually controlling the prosecution or defense of separate actions." FED. R. CIV. P. 23(b)(3)(A). This interest "may be so strong as to call for denial of a class action." FED. R. CIV. P. 23(b)(3) advisory committee's note; *see* Resnik, *supra* note 4, at 923.

[12] *See* WEINSTEIN, *supra* note 4, at 1; Roger C. Cramton, *Individualized Justice, Mass Torts, and "Settlement Class Actions": An Introduction*, 80 CORNELL L. REV. 811, 814-15 (1995); David Rosenberg, *Class Actions for Mass Torts: Doing Individual Justice by Collective Means*, 62 IND. L.J. 561, 566 n.25 (1987) [hereinafter Rosenberg, *Individual Justice*]; *see also* Roger H. Transgrud, *Joinder Alternatives in Mass Tort Litigation*, 70 CORNELL L. REV. 779, 820 (1985).

[13] *See* Susan P. Koniak, *Feasting While the Widow Weeps:* Georgine v. Amchem. Prods., Inc., 80 CORNELL L. REV. 1045, 1138-47 (1995); Richard L. Marcus, *They Can't Do That, Can They? Tort Reform Via Rule 23*, 80 CORNELL L. REV. 858, 889-90 (1995); David Rosenberg, *Of End Games and Openings in Mass Tort Cases: Lessons from a Special Master*, 69 B.U. L. REV. 695, 701 (1989) [hereinafter Rosenberg, *End Games*]; Schuck, *supra* note 4, at 976-78; Roger H. Transgrud, *Mass Trials in Mass Tort Cases: A Dissent*, 1989 U. ILL. L. REV. 69, 74-76; Williams, *supra* note 10, at 329-30; Yeazell, *supra* note 4, at 47-49; *see also* PETER H. SCHUCK, AGENT ORANGE ON TRIAL 262-63 (1986).

[14] *See, e.g.*, McDonnell Douglas Corp. v. United States Dist. Court, 523 F.2d 1083, 1085-86 (9th Cir. 1975) (noting that Rule 23 does not "permit certifications of a class whose members have independent tort claims arising out of the same occurrence and whose representatives assert only liability for damages"); *In re* Tetracycline Cases, 107 F.R.D. 719 (W.D. Mo. 1985); *Caruso*, 101 F.R.D. at 536; Sanders v. Tailored Chem. Corp., 570 F. Supp. 1543 (E.D. Pa. 1983); McElhaney v. Eli Lilly & Co., 93 F.R.D. 875, 878 (D.S.D. 1982); Ryan v. Eli Lilly & Co., 84 F.R.D. 230 (D.S.C. 1979); Marchesi v. Eastern Airlines, Inc., 68 F.R.D. 500, 501 (E.D.N.Y. 1975); Harrigan v. United States, 63 F.R.D. 402 (E.D. Pa. 1974); Daye v. Pennsylvania, 344 F. Supp. 1337, 1342-43 (E.D. Pa. 1972), *aff'd*, 483 F.2d 294 (3d Cir. 1973); Hobbs v. Northeast Airlines, Inc., 50 F.R.D. 76 (E.D. Pa. 1970); *see also* Rosenfeld v. A.H. Robins Co., 407 N.Y.S.2d 196 (N.Y. App. Div. 1978); Snyder v. Hooker Chem. & Plastics Corp., 429 N.Y.S.2d 153 (N.Y.

of individual control over litigation involving personal injuries was typically a significant consideration in these decisions.[15] It was also suggested that individual issues relevant to liability would tend to overwhelm any common factual or legal issues that might exist, thereby diminishing the efficacy of collective treatment.[16]

From this consistent rejection in the 1970s and early 1980s, courts moved to a second phase that corresponded closely with the burgeoning of asbestos and other mass tort litigation. Beginning in the mid-1980s, courts began to be increasingly willing to certify mass tort class actions.[17] As courts began to process large numbers of individual mass tort cases, they also began to see advantages in class action collectivist procedures.[18] In part, the movement toward class action treatment was driven by the siege mentality generated in some courts that were overwhelmed with asbestos or other mass tort litigation.[19] This change in attitude was also driven by recognition that mass tort

---

Sup. Ct. 1980); *but see In re* Gabel, 350 F. Supp. 624, 630 (C.D. Cal. 1972), *rejected by McDonnell Douglas Corp.*, 523 F.2d 1083.

Collective treatment was accomplished through other aggregative techniques, such as consolidation and bankruptcy. *See* Resnik, *supra* note 4, at 925-30; Judith Resnik, *From "Cases" to "Litigation"*, 54 LAW & CONTEMP. PROBS. 5 (1991); Yeazell, *supra* note 4, at 64-68.

[15] *See, e.g.*, *Caruso*, 101 F.R.D. at 537; Causey v. Pan American World Airways, Inc., 66 F.R.D. 392, 399 (E.D. Va. 1975); *Yandle*, 65 F.R.D. at 569; *Hobbs*, 50 F.R.D. at 79; *cf. In re Tetracycline*, 107 F.R.D. at 732 (noting the importance of individual control but suggesting that the relatively small injuries that class members allegedly suffered undercut the need for such control).

[16] *See, e.g.*, *Caruso*, 101 F.R.D. at 535-36; Mertens v. Abbott Labs., 99 F.R.D. 38, 40-41 (D.N.H. 1983); *McElhaney*, 93 F.R.D. at 880; *Ryan*, 84 F.R.D. at 233; *see also In re* Agent Orange Prod. Liab. Litig., 818 F.2d 145, 165 (2d Cir. 1987) (noting that individual issues would warrant denial of class certification but presence of government contractor defense created a common issue appropriate for class certification); *In re* Diamond Shamrock Chems. Co., 725 F.2d 858, 860 (2d Cir. 1984) (noting existence of individual issues but declining to issue writ of mandamus directing district court to vacate certification).

[17] *See* Coffee, *Class Wars*, *supra* note 4, at 1344-45; Hensler & Peterson, *supra* note 4, at 1056-57.

[18] *See In re* School Asbestos Litig., 789 F.2d 996, 1009 (3d Cir. 1986) (noting that "the trend has been for courts to be more receptive to use of the class action in mass tort litigation"); WEINSTEIN, *supra* note 4, at 1; Hensler & Peterson, *supra* note 4, at 965-69. *See also In re* Agent Orange Prods. Liability Litig., 506 F. Supp. 762 (E.D.N.Y. 1980), *mandamus denied sub nom. In re* United States, 733 F.2d 10 (2d Cir. 1984), *and appeal dismissed*, 745 F.2d 161 (2d Cir. 1984); Payton v. Abbott Labs., 83 F.R.D. 382, 389 (D. Mass. 1979) (granting conditional class certification), *vacated*, 100 F.R.D. 336 (D. Mass. 1983); *Causey*, 66 F.R.D. at 397 (denying class action certification but noting that class treatment under Rule 23(b)(3) might be appropriate if certain conditions were present). *See generally* 7B CHARLES ALAN WRIGHT ET AL., FEDERAL PRACTICE AND PROCEDURE § 1805 (2d ed. 1986 & Supp. 1996); Williams, *supra* note 10, at 335; Scott O. Wright & Joseph A. Colussi, *The Successful Use of the Class Action Device in the Management of Skywalk Tort Litigation*, 52 U.M.K.C.L. REV. 141 (1984); Note, *Class Certification in Mass Accident Cases Under Rule 23(b)(1)*, 96 HARV. L. REV. 114 (1983).

[19] *See* Coffee, *Class Wars*, *supra* note 4, at 1350 n.23, 1363-64; *see also* Jenkins v. Raymark Indus., 782 F.2d 468, 470 (5th Cir. 1986). Professor Coffee is critical of these courts because he sees their decisions

cases were in fact good candidates for collectivized procedures because the cases often had significant overlapping issues; particularly with respect to general causation, failure to warn, and the like.[20] Moreover, the multiple repetitive trials that mass torts engendered not only created significant transaction costs for litigants,[21] but also imposed significant costs on the civil justice system, such as the delay costs imposed on other would-be litigants.[22]

The vast majority of mass tort class actions in the second phase were certified as Rule 23(b)(3) opt-out class actions which permit, typically without any limitation, claimants to opt out to pursue an individualized resolution.[23] Again, permitting opt-outs was a significant gesture toward the more traditional individualized model of tort adjudication, and Rule 23(b)(3) certification demonstrated the reluctance of courts to move from that historical model. Indeed, the Supreme Court has suggested that in certain circumstances the right to opt out of a class action to pursue a separate, individualized lawsuit may be an element of constitutional due process.[24]

---

to grant class certification as little more than self-interested attempts to eliminate the "mind-numbing boredom" of presiding over these cases. Coffee, *Class Wars*, *supra* note 4, at 1351. Courts' decisions on procedural matters may be driven in part by self-interest. Jonathan R. Macey, *Judicial Preferences, Public Choice, and the Rules of Procedure*, 23 J. LEGAL STUD. 627, 629 (1994); Janet C. Alexander, *Judges' Rational Self-Interest and Procedural Rules: Comment on Macey*, 23 J. LEGAL STUD. 647, 647-48 (1994). But multiple trials on substantially similar issues do in fact impose real costs on the civil litigation system. *See In re* Agent Orange Prods. Liab. Litig., 100 F.R.D. 718, 722-24 (E.D.N.Y. 1983), *mandamus denied sub nom. In re* Diamond Shamrock Chems. Co., 725 F.2d 858 (2d Cir. 1984), *and aff'd*, 818 F.2d 145 (2d Cir. 1987); Jon O. Newman, *Rethinking Fairness: Perspectives on the Litigation Process*, 94 YALE L.J. 1643 (1985). A significant rationale for class treatment is to alleviate these costs. *See* General Telephone Co. v. Falcon, 457 U.S. 147, 155 (1982); Califano v. Yamaski, 442 U.S. 682, 701 (1979).

[20] *See* Coffee, *Class Wars*, *supra* note 4, at 1363-64.

[21] The most frequently cited figure is from a Rand Corporation study of asbestos litigation which calculates that transaction costs accounted for $0.61 of each asbestos litigation dollar. *See* JAMES S. KAKALIK ET AL., COSTS OF ASBESTOS LITIGATION 40 (1983); Coffee, *Class Wars*, *supra* note 4, at 1348 n.15.

[22] *See* Newman, *supra* note 19, at 1649.

[23] *See* FED R. CIV. P. 23(c)(2). In many class actions, plaintiffs are provided with two opportunities to opt out: (1) under Rule 23(b)(3) when the class is certified, and (2) a "back-end" opt-out if the claimant is unsatisfied with an award made through any claims resolution facility created as part of a class action settlement. *See* Schuck, *supra* note 4, at 963-64.

[24] *See* Phillips Petroleum Co. v. Shutts, 472 U.S. 797 (1985). The *Shutts* decision is far from clear on whether and to what extent opt-out rights are a necessary part of all class actions. *See* Arthur Miller & David Crump, *Jurisdiction and Choice of Law in Multistate Actions After* Phillips Petroleum v. Shutts, 96 YALE L.J. 1, 52 (1985) (noting that "[t]here is no neat and logical means of resolving the question whether mandatory actions survive *Shutts*"); *see also* Coffee, *Class Wars*, *supra* note 4, at 1382 n.143. Indeed, the Supreme Court's opinion in *Matsushita Electrical & Industrial Co. v. Epstein*, 116 S. Ct. 873 (1996), contained two quite different views of *Shutts*. The majority opinion interpreted *Shutts* to hold that "due process for class action plaintiffs requires 'notice plus an opportunity to be heard and participate in the litigation,'"

Preserving a mechanism that allows class members to exit from the collective, however, may create real difficulties in reaching a global settlement in mass litigation. To be sure, rational apathy or economic reality might keep many claimants in the class action. But a large flight of high-stakes litigants from the class could threaten the viability of the class by destroying its ability to provide the defendant with global peace.[25] Significant opt-outs also ameliorate many of the transaction costs savings derived from eliminating multiple trials.[26] In large mass tort cases, aggregative treatment not only helps to distribute access to civil dispute resolution, it also allocates the defendants'

---

with no mention of opt-out rights. *Matsushita*, 116 S. Ct. at 880 (quoting *Shutts*, 472 U.S. at 812). By contrast, a separate opinion by Justice Ginsburg stressed that the *Shutts* opinion "listed minimal procedural due process requirements a class action money judgment must meet if it is to bind absentees; those requirements include notice, an opportunity to be heard, a right to opt out, and adequate representation." *Id.* at 888 (Ginsburg, J., concurring in part and dissenting in part).

An argument can be made that *Shutts* does not hold that opt-out rights are required in every class action. Rather, a close reading of *Shutts* demonstrates that the court employed the opt-out right as a form of fictional consent to address a personal jurisdiction issue that might have prevented class certification. *See Shutts*, 472 U.S. at 806. *Shutts* can be read as requiring opt-out rights only for out-of-state plaintiffs that lack minimum contacts with the forum jurisdiction in a Rule 23(b)(3) case. *See, e.g.*, Grimes v. Vitalink Communications Corp., 17 F.3d 1553, 1573 (3d Cir. 1994); Brown v. Ticor Title Ins. Co., 982 F.2d 386, 391-92 (9th Cir. 1992); *In re* Drexel Burnham Lambert Group, Inc., 960 F.2d 285, 292 (2d Cir. 1992). Under this view, *Shutts* is not an impediment to mandatory class treatment; instead it suggests the importance of pragmatism and flexibility in resolving doctrinal legal questions in the context of class actions. *See In re* DES Cases, 789 F. Supp. 552, 576 (E.D.N.Y. 1992) (Weinstein, J.) (noting that *Shutts* "suggest[s] the need for modified jurisdictional analysis in the special context of mass litigation"), *appeal dismissed*, 7 F.3d 20 (2d Cir. 1993). Because national class actions are necessary to provide relief where it might otherwise be unattainable, *Shutts* adopted a lower standard of "minimal procedural due process" to replace minimum contacts. *In re DES*, 789 F. Supp. at 576. The reliance on opt-out rights was a manifestation of the "time-honored jurisdiction stretching technique of implied consent to cope with the special problem of jurisdiction in mass class actions. . . . " *Id.* at 577.

In any event, even this more limited reading of *Shutts* may have important implications for class action dynamics to the extent it creates opportunities for some, but not all, class members to opt out of the class. *See infra* Part IV.

[25] *See In re* Asbestos Litig., 90 F.3d 963, 970 (5th Cir. 1996) (noting that in settlement negotiations defendant insisted on a non-opt-out class action because "it was unwilling to pay billions in settlement and forego its substantial arguments . . . without the assurance that it did not face unknown liabilities in the future"); *In re* Silicone Gel Breast Implant Prods. Liab. Litig., No. CV-92-P-10000-S, 1994 U.S. Dist. LEXIS 12521, at *17 (N.D. Ala. Sept. 1, 1994) (noting that number of opt-outs "raises the specter that one or more defendants may elect to withdraw from the settlement in view of risks and costs of potential litigation with these claimants").

[26] *See In re* Joint E. & S. Dist. Asbestos Litig., 78 F.3d 764, 779 (2d Cir. 1996) (noting trial court's determination in Rule 23(b)(1)(B) class action that allowing one group of litigants to opt out would destroy "delicate balancing of interests" that settlement reflected); *see also* Georgine v. Amchem Prods., Inc., 160 F.R.D. 478, 490 (E.D. Pa. 1995), *cert. granted sub nom.* Amchem Prods., Inc. v. Windsor, 117 S. Ct. 379 (1996); WEINSTEIN, *supra* note 4, at 26, 136 n.108 (arguing that the right to opt out "may make full use of the class action device impossible"); Alvin B. Rubin, *Mass Torts and Litigation Disasters*, 20 GA. L. REV. 429, 449 (1986).

scarce assets.[27] Large-scale litigation thus involves two different kinds of common pool or "tragedy of the commons"[28] effects. On a macro level, many of the costs associated with multiple, repetitive trials are externalities from the perspective of the class action attorneys, litigants, or individual courts. A significant collective action problem arises because parties in mass tort cases have little incentive to advocate collectivist strategies that might limit the costs of individualization. These claimants might oppose collective processes if they interfere with a disaggregative strategy that is individually beneficial to them.[29] Individual litigants and their attorneys may not rationally care that trying a series of overlapping or identical tort cases might require a significantly greater expenditure of time on the part of the judiciary than would resolution through a class action because such individuals may not bear the full costs of individual trials. Similarly, they may not care that such a disaggregative procedure might prevent or delay other litigants from utilizing the civil justice system.

On the level of the individual case, a defendant's assets are a common pool from which all injured claimants must obtain their recoveries. In many class

---

[27] *See* General Telephone Co. v. Falcon, 457 U.S. 147, 155 (1982); Cramton, *supra* note 12, at 817; Courtland H. Peterson & Joachim Zekoll, *Mass Torts*, 42 AM. J. COMP. L. 79, 97 (1994). In mass tort cases, efficiency concerns are the most common justification for class action treatment. *See, e.g.*, Sterling v. Velsicol Chem. Corp., 855 F.2d 1188, 1196-97 (6th Cir. 1988).

[28] *See* DOUGLAS G. BAIRD ET AL., GAME THEORY AND THE LAW 34, 316-17 (1994); ROBERT GIBBONS, GAME THEORY FOR APPLIED ECONOMISTS 27-29 (1992); Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243 (1968).

[29] The disaggregative approach appears to be one of two dominant strategies that prevail in the plaintiffs' mass tort bar. This strategy relies in part on the ability of a plaintiffs' firm to impose substantial costs on the defendants. *See* Coffee, *Class Wars*, *supra* note 4, at 1364-65; Joseph Nocera, *Fatal Litigation*, FORTUNE, Oct. 16, 1995, at 60. For example, in one attempt to certify a class of *Dalkon Shield* claimants, all but one of the 166 plaintiffs' counsel opposed certification. *See* Yeazell, *supra* note 4, at 58.

Rational individual strategies might encourage litigants to multiply the expenses associated with numerous individual actions. Defendants, for example, might choose the common strategy of "divide and conquer," or might prefer that plaintiffs have to wait in long docket queues for a trial because the prospect of a long delay might encourage plaintiffs to settle cheaply. Or, defendants may calculate that the total number of claimants will be fewer without a class action because suits by small claimants or those with weak claims may not be economically viable. Individual plaintiffs or their attorneys might expect a greater recovery or fee award in an individual case. *See* Coffee, *Entrepreneurial Litigation*, *supra* note 4, at 908-10; Rosenberg, *Individual Justice*, *supra* note 12, at 581-82; Yeazell, *supra* note 4, at 58.

Other attorneys pursue an aggregative approach that seeks to benefit from being named to a lucrative position as the lead counsel, or as an attorney on the plaintiffs' steering committee, or by settling large inventories of individual cases. *See In re* Agent Orange Prods. Liab. Litig., 818 F.2d 145, 165 (2d Cir. 1987); Joseph A. Grundfest & Michael A. Perino, *The Pentium Papers: A Case Study of Collective Institutional Investor Activism in Litigation*, 38 U. ARIZ. L. REV. 559, 601-02 (1996); *see also* Coffee, *Class Wars*, *supra* note 4, at 1364-65; Coffee, *Entrepreneurial Litigation*, *supra* note 4, at 911-12; Nocera, *supra* at 60.

actions those assets will be more than sufficient to satisfy all claims. A significant portion of mass tort cases, however, may involve damages that test the limits of those assets. Common pool problems arise when competing claimants have potentially overlapping interests and where acquisition creates an absolute priority of ownership.[30] In such cases, some individual claimants may impose significant externalities on other litigants through pursuit of disaggregative strategies. In a class action, opting out of the aggregative procedure to pursue individual adjudication may permit individual litigants to obtain a disproportionately large portion of those assets. Individual litigants seeking to maximize their own recoveries are not likely to care that costly individual litigation might deplete a defendant's assets and thereby diminish other claimants' recoveries.[31]

The third phase in the mass tort evolutionary cycle was characterized by judicial attempts to overcome these problems through the use of mandatory classes. Such classes significantly enhance the possibility of avoiding the inequitable allocation of assets that may arise from pursuit of disaggregative strategies,[32] and they obviously allow defendants to obtain global resolution of disputes, thereby facilitating settlement efforts.[33] But mandatory classes also represent a much greater move away from individualization and have typically come up against much greater resistance than opt-out class actions. In large part, mandatory class actions in mass tort cases have been relegated to the procedural hinterlands. Only a few courts have been willing to certify such actions, and precious few of these decisions have been upheld on appeal.[34]

The theoretical basis for mandatory class actions is much different from opt-out class actions and individualized tort cases. The same focus on individual control that makes opt-out rights necessary under Rule 23(b)(3) is absent from, and indeed is antithetical to, the reasons for class certification under Rule 23(b)(1). In (b)(1) cases, it is appropriate to diminish individual control because aggregation is based on necessity, not consent.[35] Subdivision (b)(1)

---

[30] *See* Randal C. Picker, *Security Interests, Misbehavior, and Common Pools*, 59 U. CHI. L. REV. 645, 647 (1992).

[31] *See In re* Drexel Burnham Lambert Group, Inc., 960 F.2d 285, 292 (2d Cir. 1992).

[32] *See* Cutler v. 65 Sec. Plan, 831 F. Supp. 1008, 1021 (E.D.N.Y. 1993) (Weinstein, J.).

[33] *See id.* at 1020; WEINSTEIN, *supra* note 4, at 135-36.

[34] *See* cases cited *infra* notes 38, 48.

[35] *See* STEPHEN C. YEAZELL, FROM MEDIEVAL GROUP LITIGATION TO THE MODERN CLASS ACTION 240-66 (1987). Rule 23(b)(3) is not strictly a consent-based aggregative procedure. By incorporating the

actions were envisioned for situations in which allowing opt-outs would create the risk of systematic unfairness to other class members.[36] By contrast, opt-out rights are required in a (b)(3) action because it is only those actions in which the interests of the individuals in pursuing their own lawsuits may be so strong as to outweigh the necessity of unitary adjudication.[37]

The major difficulty for courts that attempted to certify mass tort cases as mandatory class actions under Rule 23(b)(1) was finding a way to convert a collection of tort claims that would historically be subject to individual adjudication into the kind of class action that would be amenable to a non-opt-out class.[38] In other words, courts needed an analytical hook that would overcome the focus on individuality found in Rule 23(b)(3). Thus, the history of mass tort mandatory class actions has been predominantly the search for the doctrinal justification for employing subdivision (b)(1)'s solution to the collective action problem that can arise when a multitude of individualized damage claims are asserted against a defendant.

That search led most often to the limited fund doctrine. Traditionally, a limited fund was thought of as a readily identifiable, specific, limited sum of money upon which numerous claims existed that exceeded the amount of the fund.[39] Unitary adjudication was appropriate to prevent an inequitable distri-

---

adequacy of representation requirement of Rule 23(a)(4), the drafters also incorporated notions of collectivism based on representation. *See generally* YEAZELL, *supra*, at 250-55.

[36] *See* YEAZELL, *supra* note 35, at 256-57; Robert G. Bone, *Personal and Impersonal Litigative Forms: Reconceiving the History of Adjudicative Representation*, 70 B.U. L. REV. 213, 298 n.203 (1990).

[37] *See* FED. R. CIV. P. 23(c)(2) advisory committee's note.

[38] A number of courts have discussed the issue. *See, e.g.*, Jenkins v. Raymark Indus., 109 F.R.D. 269, 274-77 (E.D. Tex. 1985), *aff'd*, 782 F.2d 468 (5th Cir. 1986); *In re* Asbestos Sch. Litig., 104 F.R.D. 422 (E.D. Pa. 1984), *modified*, 107 F.R.D. 215 (E.D. Pa. 1985), *aff'd in part and rev'd in part*, 789 F.2d 996 (3d Cir. 1986); *In re* Federal Skywalk Cases, 93 F.R.D. 415 (W.D. Mo.), *vacated*, 680 F.2d 1175 (8th Cir. 1982); *Dalkon Shield*, 521 F. Supp. 1188 (N.D. Cal.), *modified*, 526 F. Supp. 887 (N.D. Cal. 1981), *vacated*, 693 F.2d 847 (9th Cir. 1982); Coburn v. 4-R Corp., 77 F.R.D. 43 (E.D. Ky. 1977), *mandamus denied sub nom.* Union Light, Heat & Power Co. v. United States Dist. Court, 588 F.2d 543 (6th Cir. 1978); Hernandez v. Motor Vessel Skyward, 61 F.R.D. 558 (S.D. Fla. 1973), *aff'd*, 507 F.2d 1278 (5th Cir.), *and aff'd*, 507 F.2d 1279 (5th Cir. 1975).

[39] *See* 7A WRIGHT ET AL., *supra* note 18, § 1774; *see, e.g.*, Phillips Petroleum Co. v. Shutts, 472 U.S. 797, 820 (1985); *In re* Dennis Greenman Sec. Litig., 829 F.2d 1539, 1546 (11th Cir. 1987); *In re* Bendectin Prods. Liab. Litig., 749 F.2d 300, 305-06 (6th Cir. 1984); Green v. Occidental Petroleum Corp., 541 F.2d 1335, 1340 n.9 (9th Cir. 1976); *Cutler*, 831 F. Supp. at 1020-21; County of Suffolk v. Long Island Lighting Co., 710 F. Supp. 1407, 1417 (E.D.N.Y. 1989); Alexander Grant & Co. v. McAlister, 116 F.R.D. 583, 590 (S.D. Ohio 1987); Bower v. Bunker Hill Co., 114 F.R.D. 587, 595-96 (E.D. Wash. 1986). A mandatory class under subdivision (b)(1)(B) is appropriate in such cases because:

bution of the fund whereby claimants who had the good fortune of having an early resolution of their claims receive a full recovery while later claimants receive only partial or even no recovery. Implicit in this rationale is the notion that a single, mandatory action permits the court to make an equitable, pro rata distribution such that each claimant would receive something less than a full recovery so that all eligible claimants could receive some recovery.[40] Courts experimenting with mandatory classing in the mass tort context extended the limited fund concept to cases where the claims against the defendant exceeded or might exceed its assets or the limits of insurance policies.[41] As in traditional limited fund cases, mandatory classing was deemed necessary to prevent a "race to the courthouse," in which the first claimants to prosecute their claims would be able to recover while later claimants received only "worthless judgments."[42] Reconceptualizing a mass tort case as a limited fund case allowed the courts to change their focus from the importance of individual litigative autonomy to the "the collective best interests of all parties concerned."[43]

Where defendants' assets were likely in excess of claims, courts seeking to create a mandatory class sometimes attempted to certify only particular issues, such as punitive damages, for mandatory treatment.[44] Under the so-called "punitive damages overkill" theory,[45] punitive damages were said to represent a limited fund because state law or due process prevents a defendant

---

> an adjudication as to one or more members of the class will necessarily or probably have an adverse practical effect on the interests of other members who should therefore be represented in the lawsuit. This is plainly the case when claims are made by numerous persons against a fund insufficient to satisfy all claims. A class action by or against representative members to settle the validity of the claims as a whole, or in groups, followed by separate proof of the amount of each valid claim and proportionate distribution of the fund, meets the problem.

FED. R. CIV. P. 23(b)(1)(B) advisory committee's note.

[40] *See In re* Asbestos Litig., 90 F.3d 963, 986 (5th Cir. 1996).

[41] *See In re* A.H. Robins Co., Inc., 880 F.2d 709 (4th Cir. 1989); Ahearn v. Fibreboard, Civ. Act. No. 6:93cv526, 1995 U.S. Dist. LEXIS 11523, at *15-37 (E.D. Tex. July 27, 1995); *In re Federal Skywalk*, 93 F.R.D. at 424; *Coburn*, 77 F.R.D. at 45 (noting that claims asserted in suits on file exceeded the defendant's assets); *Hernandez*, 61 F.R.D. at 561 n.8; *see also* William W. Schwarzer, *Settlement of Mass Tort Class Actions: Order out of Chaos*, 80 CORNELL L. REV. 837, 840 (1995); Williams, *supra* note 10, at 326.

[42] *Coburn*, 77 F.R.D. at 45.

[43] *In re Federal Skywalk*, 93 F.R.D. at 423; *see* Williams, *supra* note 10, at 332.

[44] *See In re Asbestos Sch. Litig.*, 104 F.R.D. at 434-38; *In re Federal Skywalk*, 93 F.R.D. at 424-25; *Dalkon Shield*, 521 F. Supp. at 1192-94. Federal Rule of Civil Procedure 23(c)(4)(A) permits a court to certify a specified subset of issues for class certification.

[45] The phrase derives from Judge Friendly's opinion in *Roginsky v. Richardson-Merrell, Inc.*, 378 F.2d 832, 839 n.11 (2d Cir. 1967).

from paying an unlimited amount of such damages.[46] Rule 23(b)(1)(B) treatment was appropriate in order to assure that each plaintiff would have an equal opportunity to receive an equitable portion of those punitive damages, rather than all or most of the potential punitive damages going to the first plaintiffs to bring their cases to trial.[47]

Most of the attempts to certify mandatory mass tort class actions were reversed on appeal.[48] Mandatory classes were not found to be improper as a matter of law, and some courts even commended district court judges for their innovative attempts to employ mandatory classes.[49] Still, most appellate courts seemed quite uncomfortable with the idea of the completely collectivized procedure mandatory classes represented. These courts seemed to continue to view the claimants as a collection of individuals with separate tort claims, not as individuals competing to recover from the same pool of assets. This discomfort is most clearly seen in the unreasonably high hurdles some appellate courts established for finding the existence of a limited fund.[50] Some decisions certifying subdivision (b)(1) classes were not reversed, most

---

[46] *See In re Federal Skywalk*, 93 F.R.D. at 424-25.

[47] *See id.*

[48] *See In re* School Asbestos Litig., 789 F.2d 996 (3d Cir. 1986); *In re* Bendectin Prods. Liab. Litig., 749 F.2d 300 (6th Cir. 1984); *Dalkon Shield*, 693 F.2d 847 (9th Cir. 1982); *In re* Federal Skywalk Cases, 680 F.2d 1175 (8th Cir. 1982). Appellate courts have often found that insufficient fact-finding accompanied the decision to certify a mandatory class. *See, e.g., In re Bendectin*, 749 F.2d at 306; *Dalkon Shield*, 693 F.2d at 852 (criticizing lower court for finding existence of limited fund without obtaining sufficient evidence of Robins' net worth, earnings, or the extent of its insurance coverage). *See also* Payton v. Abbott Labs., 83 F.R.D. 382, 389 (D. Mass. 1979) (noting that without evidence of likely insolvency, "numerous plaintiffs and a large *ad damnum* clause should [not] guarantee (b)(1)(B) certification").

Courts reversing Rule 23(b)(1) certifications raised other potential stumbling blocks as well. One concern was the Anti-Injunction Act, which prohibits a federal court from enjoining state court proceedings "except as expressly authorized by Act of Congress, or where necessary in aid of its jurisdiction or to protect or effectuate its judgment." 28 U.S.C. § 2283 (1994). To the extent that state cases were already pending when the court approved a mandatory federal court class action, the certification order could be seen as an injunction of those state court proceedings. *See In re School Asbestos Litig.*, 789 F.2d at 1002; *In re Federal Skywalk*, 680 F.2d at 1181-83. Courts also noted that in diversity actions "certification of a mandatory class raises serious questions of personal jurisdiction and intrusion into the autonomous operation of state judicial systems." *In re School Asbestos Litig.*, 789 F.2d at 1002. Concerns about personal jurisdiction raise questions about the scope of the Supreme Court's decision in *Philips Petroleum Co. v. Shutts*, 472 U.S. 797 (U.S. 1985); *see supra* note 24.

[49] *See In re Bendectin*, 749 F.2d at 307 (noting that "[o]n pure policy grounds, the district judge's decision may be commendable"); *Dalkon Shield*, 693 F.2d at 851 (recognizing that mandatory classes might be appropriate in some mass tort cases); *In re Federal Skywalk*, 680 F.2d at 1177 n.4, 1183 (noting the district court's "legitimate concern for the efficient management of mass tort litigation" and commending the court for its "creative efforts in attempting to achieve a fair, efficient and economical trial for victims").

[50] *See, e.g., Dalkon Shield*, 693 F.2d at 851-52 (holding that mandatory class was only permitted where record established that "separate damages awards inescapably will affect later awards").

notably *In re "Agent Orange" Products Liability Litigation*[51] and *In re A.H. Robins Co.*,[52] but these cases were hardly unequivocal endorsements of mandatory classing.[53]

Mass tort class actions have now entered a fourth phase in which district courts continue to appreciate the benefits of mass tort class actions.[54] Lower courts have recently approved a number of innovative and controversial techniques mass tort litigants have employed to help facilitate global class resolutions. These techniques include settlement classes, in which an action, a request for class certification, and a proposed settlement are filed contemporaneously; or classes limited to claimants whose injuries will only manifest, if at all, in the future. One common thread running through these techniques is that they decrease the likelihood that significant opt-outs will destroy the viability of a global class resolution for the participating defendants.

---

[51] 100 F.R.D. 718 (E.D.N.Y. 1983), *mandamus denied sub nom. In re* Diamond Shamrock Chems. Co., 725 F.2d 858 (2d Cir. 1984), *and aff'd*, 818 F.2d 145 (2d Cir. 1987).

[52] 85 B.R. 373 (E.D. Va. 1988), *aff'd*, 880 F.2d 709 (4th Cir. 1989); *see also* Coburn v. 4-R Corp., 77 F.R.D. 43 (E.D. Ky. 1977), *mandamus denied sub nom.* Union Light, Heat & Power Co. v. United States Dist. Court, 588 F.2d 543 (6th Cir. 1978); Hernandez v. Motor Vessel Skyward, 61 F.R.D. 558 (S.D. Fla. 1973), *aff'd*, 507 F.2d 1278 (5th Cir.), *and aff'd*, 507 F.2d 1279 (5th Cir. 1975).

[53] On mandamus, the Second Circuit did not overturn certification of a punitive damages mandatory class. *In re Diamond Shamrock*, 725 F.2d at 862. On a later appeal of the class settlement, it refused to address the propriety of the mandatory class. Instead, it upheld class certification only under Rule 23(b)(3), and only because of the centrality of the government contractor defense. *In re Agent Orange*, 818 F.2d at 163-67. In *A.H. Robins*, the company was in bankruptcy and the certification of a mandatory class was upheld on appeal in connection with a suit against the company's products liability insurance carrier. 880 F.2d at 710. Certification of a mandatory class was part of a larger settlement agreement, and was unopposed by defendants. *Id.* at 717-18. Moreover, the class was not purely mandatory because the claims resolution facility negotiated as part of the settlement provided a back-end opt-out right if a claimant was unsatisfied with her award. *Id.* at 745.

More recently, other courts have given their approval to mandatory classes, although sometimes with significant qualifications. A mandatory class was used in *In re Joint E. & S. Dist. Asbestos Litig.*, 129 B.R. 710, 806 (E. & S.D.N.Y. 1991), *vacated on other grounds*, 982 F.2d 721 (2d Cir. 1992), *modified*, 993 F.2d 7 (2d Cir. 1993). That case was much closer to a traditional limited fund case because it involved the restructuring of a trust established to compensate asbestos claimants through filing and rapidly settling a mandatory class action. Although the Second Circuit did not overturn certification of a mandatory class, it nonetheless vacated the lower court decision to approve the settlement because of its use of a (b)(1)(B) class action without designating proper subclasses. 982 F.2d at 725. In addition, the Fifth Circuit upheld approval of a settlement in another mandatory class action that also contained limited back-end opt-out rights. *In re* Asbestos Litig. 90 F.3d 963, 972-73 (5th Cir. 1996). In upholding the settlement, the court noted that it provides "a simple process for injured persons to quickly obtain a fair resolution of their claims and at the same time safeguard their ultimate right to resort to the tort system." *Id.*

[54] *See* Coffee, *Class Wars*, *supra* note 4, at 1345; Schuck, *supra* note 4, at 957-58.

These recent responses to the dilemmas mass tort class actions create have not fared terribly well in the appellate courts. Not only have many appellate courts criticized these efforts, these courts have also reasserted much of their original skepticism about the utility of mass tort class actions.[55] In four cases since 1995, federal appeals courts have decertified class actions involving HIV-infected blood products,[56] asbestos,[57] penile implants,[58] and cigarettes.[59] In each of these cases the courts raised grave concerns about the whether mass tort class actions, even those with opt-out rights, are appropriate.[60] Many of these concerns are highly reminiscent of the concerns raised in the first phase of mass tort litigation.[61] For example, a number of these courts stressed the multiplicity of individual issues that would likely exist if the cases went to trial.[62] The courts also expressed the importance of preserving individualization, either through the maintenance of opt-out rights or the denial of class certification in situations where opt-out rights would be insufficient to preserve individualization.[63]

In short, the courts have in large part come full circle in their treatment of mass tort class actions because the judiciary has proved unable to resolve the tension between individual autonomy and the need for global resolution in the

---

[55] This view is by no means universal. *See In re Asbestos Litig.*, 90 F.3d at 972-73 (upholding mandatory class action settlement); *In re* Agent Orange Prods. Liab. Litig., 996 F.2d 1425 (2d Cir. 1993) (rejecting claim that class action settlement did not bind parties whose injuries allegedly did not manifest or were not discovered until after opt-out date, and who therefore allegedly had no meaningful opportunity to exclude themselves from the class).

[56] *In re* Rhone-Poulenc Rorer Inc., 51 F.3d 1293 (7th Cir.), *cert. denied*, 116 S. Ct. 184 (1995).

[57] Georgine v. Amchem Prods. Inc., 83 F.3d 610 (3d Cir.), *cert. granted sub nom.* Amchem Prods., Inc. v. Windsor, 117 S. Ct. 379 (1996).

[58] *In re* American Med. Sys., Inc., 75 F.3d 1069, 1080-82 (6th Cir. 1996).

[59] Castano v. American Tobacco Co., 84 F.3d 734 (5th Cir. 1996).

[60] *See Castano*, 84 F.3d at 741-51; *Georgine*, 83 F.3d at 626-34; *American Med.*, 75 F.3d at 1078-82; *Rhone-Poulenc*, 51 F.3d at 1298-1304.

[61] Additionally, courts have begun to argue that class actions may be inappropriate in certain mass tort cases because they magnify the defendant's stakes and thereby create inappropriate pressure on defendants to settle meritless cases. *See Castano*, 84 F.3d at 746; *Rhone-Poulenc*, 51 F.3d at 1298-1300.

[62] *See Castano*, 84 F.3d at 741-45; *Georgine*, 83 F.3d at 626-34; *American Med.*, 75 F.3d at 1081.

[63] In *Georgine*, the Third Circuit erected higher barriers for obtaining class treatment in cases involving personal injuries or death. 83 F.3d at 627, 632 (noting that in such cases "[e]ach plaintiff has a significant interest in individually controlling the prosecution of separate actions"). Indeed, the court distinguished an earlier case in which it had upheld certification of an opt-out class action, *In re* School Asbestos Litigation, 789 F.2d 996, 1010 (3d Cir. 1986), because that case involved only property damage claims. *Georgine*, 83 F.3d at 627. The *Georgine* court was also troubled by the structure of the back-end opt-out rights contained in the class action settlement, which it found to be "limited to a few persons per year." *Id.* at 630. For discussion of the importance of preserving individualization see *Castano*, 84 F.3d at 738-39; *American Med.*, 75 F.3d at 1084-85; *Rhone-Poulenc*, 51 F.3d at 1297.

prosecution of these proceedings. At the heart of that tension lie the game theoretic concepts of core that are discussed below. These concepts, which have to date been absent from the academic literature on class actions, help to explain many of the observed problems that the judiciary has addressed but failed to solve.

III. THE THEORY OF CLASS ACTIONS AND THE CONCEPT OF CORE

The chaotic and evolving state of mass tort class action law has proved a fertile ground for academia. Much of the rich academic literature that has sprung up over the last decade has viewed opt-out rights as an important check against attorney opportunism and other agency cost problems that can arise in class litigation. To date, none of this literature has explored the application of core theory to class actions and the problems associated with obtaining a global resolution of class litigation while still preserving a means for individual adjudication through opt-out rights. As discussed below, the academic assessment of opt-out rights would greatly benefit from core theoretic principles. Core theory provides a powerful descriptive tool for the analysis of class actions because it describes the conditions under which coalitions will or will not tend to be stable.

A. The Academic Assessment of Opt-Out Rights

Over approximately the last decade, an economic analysis of class actions has emerged that has demonstrated the significant agency cost problems that can occur in class action litigation.[64] Briefly stated, this analysis has focused on the significantly different incentives that can exist between an attorney and the class members she represents. The limited ability of most class members

---

[64] *See* Coffee, *Class Wars*, *supra* note 4; Coffee, *Entrepreneurial Litigation*, *supra* note 4; John C. Coffee, Jr., *Rethinking the Class Action: A Policy Primer on Reform*, 62 IND. L.J. 625 (1987) [hereinafter Coffee, *Rethinking the Class Action*]; John C. Coffee, Jr., *Understanding the Plaintiff's Attorney: The Implications of Economic Theory for Private Enforcement of Law Through Class and Derivative Actions*, 86 COLUM. L. REV. 669 (1986) [hereinafter Coffee, *Understanding the Plaintiff's Attorney*]; John C. Coffee, Jr., *The Unfaithful Champion: The Plaintiff as Monitor in Shareholder Litigation*, 48 L. & CONTEMP. PROBS. 5 (1985) [hereinafter Coffee, *Unfaithful Champion*]; Jonathan R. Macey & Geoffrey P. Miller, *The Plaintiffs' Attorney's Role in Class Action and Derivative Litigation: Economic Analysis and Recommendations for Reform*, 58 U. CHI. L. REV. 1 (1991); *see also* Janet Cooper Alexander, *Do the Merits Matter? A Study of Securities Class Action Settlements*, 43 STAN. L. REV. 497 (1993); Francis E. McGovern, *Resolving Mature Mass Tort Litigation*, 69 B.U. L. REV. 659, 664-65 (1989).

to monitor effectively the class attorney creates a situation in which the attorney may act in her own best interests rather than in the best interests of her clients. In short, the dynamics of class litigation create a situation where an attorney can engage in opportunistic behavior to the detriment of the class.

This critique of class actions has strongly influenced analysis of the dilemma that opt-out rights present. To be sure, many scholars recognize that a pure individualized system of tort adjudication makes little sense in mass torts.[65] Indeed, there has been a great synergy between the academy and the bench with respect to the tension between individual autonomy and aggregative class procedure. Like the courts, class action scholars recognize that the ability to opt out may destroy the viability of a class action if the prospect of obtaining large compensatory or punitive damages awards from sympathetic juries drives large-stakes claimants from the class.[66] Scholars have also recognized that as a practical matter, the ability to opt out is unevenly distributed.[67] Small claimants typically have no realistic opportunity to opt out of the collective because their claims are unlikely to be economically viable as inde-

---

[65] *See, e.g.*, Coffee, *Class Wars*, *supra* note 4, at 1346 (arguing that "proposals for the return to a traditional system of individual case litigation are apt to be as quixotic as they are costly"); Coffee, *Entrepreneurial Litigation*, *supra* note 4, at 877 n.2; Cramton, *supra* note 12, at 816; Resnik, *supra* note 4, at 925-26 (noting the general trend away from individualization toward aggregation); Schuck, *supra* note 4, at 980.

[66] *See* Kenneth S. Abraham, *Individual Action and Collective Responsibility: The Dilemma of Mass Tort Reform*, 73 U. VA. L. REV. 845, 878 (1987); Linda S. Mullenix, *Beyond Consolidation: Postaggregative Procedure in Asbestos Mass Tort Litigation*, 32 WM. & MARY L. REV. 475, 507 (1991); Linda S. Mullenix, *Class Resolution of the Mass-Tort Case: A Proposed Federal Procedure Act*, 64 TEX. L. REV. 1039, 1066-67, 1072-73 (1986) [hereinafter Mullenix, *Proposed Federal Procedure Act*]; Rosenberg, *End Games*, *supra* note 13, at 705 (noting that "even fully informed claimants may choose to opt out of an adequate damage schedule for the expected gains of separate trial before an overly sympathetic jury"); Schuck, *supra* note 4, at 965, 968.

Like the courts, scholars have recognized that if this effect is too extensive, then it may destroy the benefits of any settlement for the defendant. *See* Schuck, *supra* note 4, at 963-65. Defendants in these cases have come to expect that stronger claimants may seek to opt out and have sought to protect themselves should the opt-outs become too numerous by inserting "walk-away" provisions in settlements. *See In re* Silicone Gel Breast Implant Prods. Liab. Litig., No. CV-92-P-100000-S, 1994 U.S. Dist. LEXIS 12521, at *17, *23, *65 (N.D. Ala. Sept. 1, 1994); Georgine v. Amchem Prods., Inc., 157 F.R.D. 246, 325 (E.D. Pa. 1994) (noting that settlement provided that if too many plaintiffs opted out of the class, then the defendants could walk away), *vacated*, 83 F.3d 610 (3d Cir.), *cert. granted sub nom.* Amchem Prods., Inc. v. Windsor, 117 S. Ct. 379 (1996); Thomas M. Burton, *Most Hemophiliacs Reject Settlement from Baxter, Bayer on Infection Suit*, WALL ST. J., May 14, 1996, at B6; *see also* Coffee, *Class Wars*, *supra* note 4, at 1382 n.144.

[67] Some commentators note that the importance of such rights will vary greatly with the type of litigation. *See, e.g.*, William W. Schwarzer, *Structuring Multiclaim Litigation: Should Rule 23 Be Revised?*, 94 MICH. L. REV. 1250, 1255-58, 1264 (1996) [hereinafter Schwarzer, *Structuring Multiclaim Litigation*].

pendent suits.[68] Large claimants may then benefit from the class discovery or trial preparation that may be more extensive than any individual litigant could afford on its own. In effect, small claimants may subsidize large claimants' individual suits and similarly situated plaintiffs may receive substantially different recoveries.[69]

Nonetheless, the significant agency cost and collective action problems that can exist in class actions have led a number of scholars to suggest that opt-out rights serve important instrumental, as well as normative and symbolic, functions. Scholars have argued that opt-out rights can serve as a market check on the fairness and adequacy of class action global settlements that may limit the opportunities for class counsel to "sell out" the class for a significant fee award.[70] This market-checking function is thought to be a vital protection against attorney opportunism or collusion.[71] To limit opportunistic opt-outs, various scholars suggest restricting opt-outs. These proposals typically involve taxing class action discovery costs to opt-outs or limiting attorney's fees in individual actions to the difference between the individual recovery and what the recovery would have been in the class action.[72]

---

[68] *See* Cramton, *supra* note 12, at 824.

[69] *See* Abraham, *supra* note 66, at 878; Rosenberg, *End Games*, *supra* note 13, at 702; Schuck, *supra* note 4, at 942-43 & n.6.

[70] *See* Rosenberg, *End Games*, *supra* note 13, at 705; Schuck, *supra* note 4, at 964.

[71] Coffee, *Class Wars*, *supra* note 4, at 1382-83; Cramton, *supra* note 12, at 825-26; Koniak, *supra* note 13, at 1137-51; Marcus, *supra* note 13, at 889-90; Rabin, *supra* note 1, at 1044; Rosenberg, *Individual Justice*, *supra* note 12, at 594; Schuck, *supra* note 4, at 963-68.

[72] *See, e.g.*, Coffee, *Entrepreneurial Litigation*, *supra* note 4, at 925-30; Mullenix, *Proposed Federal Procedure Act*, *supra* note 66, at 1066-67, 1072-73; Rosenberg, *End Games*, *supra* note 13, at 705-06, 714-15; Rubin, *supra* note 26, at 449.

Currently, the Advisory Committee on Civil Rules has proposed a number of significant changes to Rule 23. *See* Bruce D. Brown, *Rules Panel Taking Second Look at Class Action Reforms*, THE RECORD, Feb. 4, 1997, at 5. Although not contained in the latest draft, some prior proposed revisions sought to limit opportunistic opt-outs. In this prior version, the Advisory Committee proposed to abolish subdivisions (b)(1), (b)(2), and (b)(3) in favor of a unitary standard that combines the prerequisites of Rule 23(a) with the requirement of subdivision (b)(3) that the class action be superior to other available methods of adjudication. Proposed Amendments to Federal Rules of Civil Procedure, Rule 23(a)-(b) (on file with author). Once a class is certified, the court would be required to determine whether to permit opt-out rights based on, among other things, the extent and nature of the members' injuries, the potential conflicts among class members, the interest of the defendant in securing a final resolution of the controversy, and the inefficiency or impracticality of separate actions to resolve the controversy. Proposed Amendments to Federal Rules of Civil Procedure Rule 23(c) (on file with author). The Advisory Committee stressed that questions about opt-out rights "should be addressed on their own merits, given the needs and circumstances of the particular case and without being tied artificially to the particular classification of the class action." Edward H. Cooper, *Rule 23: Challenges to the Rulemaking Process*, 71 N.Y.U. L. REV. 13, 58 (1996).

Scholars have also suggested that the ability to opt out may ameliorate some of the harm that can befall high-stakes claimants from the adverse selection effects that may draw weak claimants to the class action.[73] This analysis suggests that claimants with weak or nonmeritorious claims who want to obtain some recovery from the defendant will tend to seek that recovery through the class action rather than an individual action because they hope that, despite the deficiencies in their causes of action, they may still be able to recover from a global settlement of all claims.[74] In essence, these claimants seek to become lost in the class action crowd. The presence of weak claims may drive down the average expected recovery for all claimants,[75] thereby harming those with above average claims because they will tend to recover an amount less than they could expect to obtain in an individual action.[76] Opt-out rights allow these claimants to avoid this problem.[77]

From a normative perspective, opt-out rights preserve traditional notions of individual justice by "institutionaliz[ing] and enlarg[ing] the central value of claimant autonomy."[78] The right to exclude oneself is said to dynamically balance the "competing interests in aggregating and individualizing claims," thereby allowing each claimant to choose "the particular mix of collective and individual claiming that best serves her wishes."[79] While the reality of mass

---

This proposal also would have permitted courts to place certain conditions on class members who choose to opt out. Indeed, these conditions might have been quite onerous. Among other things, the court would have been permitted to prohibit any class member who opts out of the class from pursuing the same cause of action against the defendant, which effectively amounts to mandatory certification. The court could also have prohibited opt-outs from obtaining any res judicata or collateral estoppel benefit from any class action judgment or could have taxed class action discovery costs against any opt-outs. As will be seen, these conditions can be a crucial determinant in maintaining a stable condition and thereby in creating the potential for realizing the benefits of class aggregation.

[73] *See* Coffee, *Entrepreneurial Litigation*, *supra* note 4, at 906-07; Schuck, *supra* note 4, at 961; *see also* George A. Akerlof, *The Market for "Lemons": Quality Uncertainty and the Market Mechanism*, 84 Q. J. ECON. 488 (1970). "Adverse selection now refers to any situation in which an individual has knowledge about his own quality (the goods he sells, his ability to perform, his health status) while whomever he is dealing with knows only about the characteristics of the average members of the group." VICTOR C. GOLDBERG, *Introduction* to READINGS IN THE ECONOMICS OF CONTRACT LAW 2 (Victor C. Goldberg ed., 1989). In other words, adverse selection is a problem of asymmetric information. *See* PAUL MILGROM & JOHN ROBERTS, ECONOMICS, ORGANIZATION & MANAGEMENT 150 (1992); Ian Ayres, *Playing Games with the Law*, 42 STAN. L. REV. 1291, 1308 (1990).

[74] *See* Coffee, *Entrepreneurial Litigation*, *supra* note 4, at 906-07; *see also In re* Agent Orange Prods. Liab. Litig., 818 F.2d 145, 165 (2d Cir. 1987).

[75] *See* Coffee, *Entrepreneurial Litigation*, *supra* note 4, at 917.

[76] *See id.* at 916-17.

[77] *See id.* at 906-07; *see also* Ayres, *supra* note 73, at 1307.

[78] Schuck, *supra* note 4, at 964; *see* Schwarzer, *Structuring Multiclaim Litigation*, *supra* note 67, at 1256.

[79] Schuck, *supra* note 4, at 964; *see* Heather M. Johnson, Note, *Resolution of Mass Product Liability*

tort adjudication is often far removed from the paradigm of the lawyer zealously advocating a single client's claim before a neutral judge and a jury of her peers, the notion that this paradigm still exists has a strong symbolic content.[80]

This view of opt-out rights has resulted in a large amount of highly critical commentary with respect to some of the recent innovations in mass tort class actions that are seen as limiting the practical ability of class members to opt out of the litigation. In particular, settlement class actions have come under intense scrutiny.[81] A number of scholars have pointed out that these kinds of cases are rife with the potential for attorney opportunism or collusion. Settlement classes, particularly those involving future claimants, may give defendants ample opportunity to negotiate with friendly plaintiff's attorneys and arrive at sweetheart settlements.[82] Future claimants may have no present incentive to opt out if they are unaware of the extent to which they have been injured or even that they have been exposed at all to the allegedly harmful product.[83] The opportunity to obtain a significant fee award for successfully negotiating such a settlement creates the possibility of a "race to the bottom" among plaintiff's attorneys as each seeks to be more amenable to a cheaper settlement.[84] Various kinds of delayed or back-end opt-out rights have been promoted as necessary protections to allow future claimants to evaluate meaningfully the adequacy of any settlement and to prevent them from being "uniquely disadvantaged" by mass tort class actions.[85]

Litigation Within the Federal Rules: A Case for the Increased Use of Rule 23(b)(3) Class Actions, 64 FORDHAM L. REV. 2329, 2357 (1996).

[80] *See* Rosenberg, *End Games*, *supra* note 13, at 701-02 (arguing that collective processing does not deprive individuals of actual control over litigation because they have no such control in nonaggregated cases); Schuck, *supra* note 4, at 976-78; *see also* Cutler v. 65 Sec. Plan, 831 F. Supp. 1008, 1020 (E.D.N.Y. 1993) (the right to opt out "gives [an] individual a sense that his individual rights are preserved because he can proceed in a separate lawsuit."); *In re* Joint E. & S. Dist. Asbestos Litig., 129 B.R. 107, 802 (E. & S.D.N.Y. 1991), *vacated on other grounds*, 982 F.2d 721 (2d Cir. 1992), *modified*, 993 F.2d 7 (2d Cir. 1993).

[81] *See* Coffee, *Class Wars*, *supra* note 4, at 1378-82; Cramton, *supra* note 12, at 823-36; Koniak, *supra* note 13.

[82] *See* Coffee, *Class Wars*, *supra* note 4, at 1378-82; *see also* John Leubsdorf, *Co-Opting the Class Action*, 80 CORNELL L. REV. 1222 (1995); *but see* Rosenberg, *Individual Justice*, *supra* note 12, at 569-70 (suggesting possibility for increased use of mandatory classing); Jack B. Weinstein, *The Role of the Court in Toxic Tort Litigation*, 73 GEO. L.J. 1389, 1390-91 (1985) (noting need for "a single forum for basic decision making" in mass tort cases).

[83] *See* Cramton, *supra* note 12, at 835-36; *see also In re* Agent Orange Prods. Liab. Litig., 996 F.2d 1425, 1435 (2d Cir. 1993) (noting that benefits of providing opt-out rights to future claimants were "conjectural at best").

[84] *See* Coffee, *Class Wars*, *supra* note 4, at 1378-82.

[85] *Id.* at 1350; *see* Cramton, *supra* note 12, at 835-36; Schuck, *supra* note 4, at 967. For cases em-

Similar criticisms are lodged against mandatory classes, which are thought to be particularly problematic precisely because class members do not have the option of escaping from a collusive or inadequate settlement by opting out. High-stakes claimants are said to be most affected in these cases because they are the only claimants for whom opting out is an economically viable option.[86] Thus, it has been suggested that mandatory classes provide defendants with a mechanism to settle the claims of high-stakes claimants cheaply.[87]

The academic assessment of class actions is quite powerful. Class actions surely do provide significant opportunities for attorney opportunism and other agency cost problems. This analysis, however, leaves open the question of whether the observed problems in class litigation can be explained without resort to claims of agency problems, market failure, or other procedural imperfections. The theory of the core provides just such a unifying explanation.

B. The Theory of the Core

What is the theory of the core and what does it add to the current academic assessment of class actions? What insights can it bring to the difficult task of balancing individual autonomy and global resolution in class litigation?

To begin to answer these questions, it is best to start with a simple application of core theory called the "Majority Voting Game."[88] Consider a society with three members, A, B, and C. In this society, any majority of two players has the ability to exercise 100% of the political power. Consequently, if the third person is not a member of a unanimous ruling coalition it will have no political power. For example, suppose that A and B agree to share power equally. That coalition would leave C powerless. What can we predict C will do in this situation? C can obtain some share of the political power by offering to form a coalition with B in which B will have a larger share of the power than it would in the coalition with A (say 60%) while C gets the remaining 40%. Both B and C should agree to form such a coalition because

---

ploying such an opt-out scheme, see *In re* A. H. Robins Co., 880 F.2d 694, 745 (4th Cir. 1989); *In re* Silicone Gel Breast Implant Prods. Liab. Litig., No. Civ. 92-P-100000-S, 1994 U.S. Dist. LEXIS 12521 (N.D. Ala. Sept. 1, 1994); Bowling v. Pfizer, Inc., 143 F.R.D. 141, 166 (S.D. Ohio 1992).

[86] *See* Coffee, *Class Wars*, *supra* note 4, at 1382.

[87] *See id.* at 1382-83.

[88] This example is taken from ROY GARDNER, GAMES FOR BUSINESS AND ECONOMICS 395-97, 400-01 (1995).

both would be better off than they would be under the original coalitional structure. As a result, B should defect from the coalition with A when faced with this proposal.

The Majority Voting Game places no constraints on defections or on the number of times coalitions can form. As a result, it is reasonable to expect that this same process should repeat itself, this time with A, who has been left powerless, taking the lead. A can now turn around and offer either B or C an even greater share of power than they currently possess to entice them into a ruling coalition with A. As should now be readily apparent, the Majority Voting Game has no stable solution. That is, there is no coalition that can form that will make each party better off than some other coalition that could be formed. In this game, coalitions will tend to break up and re-form unless some other constraint is placed on them.

The Majority Voting Game is analogous to a class action. In both cases a player must choose whether to remain part of a given coalition. In a class action, the coalition is simply the class itself. As with the decisions in the Majority Voting Game, the decision whether to defect from the class by exercising an opt-out option should be driven by rational self-interest. In each case a party will tend to choose the strategy that makes her better off, unless some other constraint is placed on her. In a nutshell, the game theoretic concept of core[89] describes the conditions under which these kinds of coalitions[90] will or will not tend to be stable. Core theory can thus provide significant insights into both the causes for instability in a class action setting and the likelihood for instability given a particular fact pattern or rule structure.

Core is a central concept of cooperative game theory, which examines situations in which two or more players have at least some ability to communicate, make binding commitments, and form coalitions.[91] Cooperative game

---

[89] For a general description of the concept of core, see *id.* at 397-401; PETER ORDESHOOK, GAME THEORY AND POLITICAL THEORY 339-86 (1986); MARTIN SHUBIK, GAME THEORY FOR SOCIAL SCIENCES 127-78 (1982) [hereinafter SHUBIK, GAME THEORY]; AKIRA TAKAYAMA, MATHEMATICAL ECONOMICS 204-34 (2d ed. 1985). Although game theory in general has assumed an increasingly important place in legal academics, core theory has only occasionally been used to analyze legal issues. *See, e.g.*, Keith N. Hylton, *Efficiency and Labor Law*, 87 NW. L. REV. 471, 502 (1993); Martin Shubik, *Game Theory, Law, and the Concept of Competition*, 60 U. CINN. L. REV. 285 (1991); John Shepard Wiley, Jr., *Antitrust and Core Theory*, 54 U. CHI. L. REV. 556 (1987).

[90] In game theory, coalitions are simply groups of players that can agree to coordinate their actions. *See* ORDESHOOK, *supra* note 89, at 302.

[91] *See* Wiley, *supra* note 89, at 557. Cooperative game theory is distinct from noncooperative game

theory makes two significant assumptions that are important for understanding core. First, game theory assumes that players following particular strategies in a game will receive specified payoffs.[92] Second, it assumes that players will act in their own best interests and that they will choose the coalitions through which they can obtain the highest possible payoff.[93] The heart of cooperative game theory concerns the analysis of which coalitions players should enter into to maximize their payoffs.[94]

Core is used in cooperative game theory to establish the formal conditions under which it will be rational for individuals to adopt a group resolution. A game will have a core if there is some strategy that all players can follow that will give each a greater payoff than they would receive from forming a different coalition.[95] Such games will tend to be stable (i.e., resistant to defections) because no player will have an incentive to leave the coalition. Any alternative payoff available to the player will be less than that player would obtain by staying in the current coalition. Such a solution is said to be within the core of a game.[96] Put another way, a solution to a three-person game, like the Majority Voting Game, is said to be within the core if it is rational for each person and each intermediate two-person coalition to stay in the grand coalition.[97] The core of a game is the set of solutions that leaves no individual in a position to improve its payoff by defecting from the grand coalition to form a different, intermediate coalition or to strike off on its own.[98]

By contrast, a solution is outside the core of the game if at least one player can improve its payoff by forming a different coalition, as in the Majority Voting Game. Solutions that fall outside the core of a game will tend to be unstable because there will be strong incentives for defections from the coalition.[99] Indeed, the Majority Voting Game is an example of a game in

---

theory, in which parties have no such ability to communicate and make binding commitments.

[92] *See id.* at 550.

[93] *See id.* at 557.

[94] *See* DAVID M. KREPS, GAME THEORY AND ECONOMIC MODELLING 9 (1990); Wiley, *supra* note 89, at 557.

[95] *See* Wiley, *supra* 89, at 558.

[96] *Id.*

[97] A grand coalition consists of all players in the game. *See* GARDNER, *supra* note 88, at 395.

[98] *See id.* at 383; ORDESHOOK, *supra* note 89, at 340; TAKAYAMA, *supra* note 89, at 206; Wiley, *supra* note 89, at 558. A player pursuing its own strategy is viewed as forming a coalition of one, known as a singleton. *See* GARDNER, *supra* note 88, at 395.

[99] *See* Gardner, *supra* note 88, at 400-01.

which all of the solutions fall outside the core. Games of this type are said to have an empty core because there is no solution which satisfies all players.[100]

Game theory provides a more precise mathematical description of the conditions necessary for existence of a core. These mathematical conditions illuminate a number of important points about the application of core theory to class actions. Let N be the set of finite players in the game (here Players 1, 2, and 3) and v the characteristic function that assigns values $v(S)$ to each potential coalition that is a subset of N.[101] Core theory provides that the putative class members will not opt out of the class action if the payoff associated with the strategy of remaining in the class action is individually, collectively, and coalitionally rational.[102] A payoff x will be *individually rational* to a putative class member if

$$x_i \geq v(\{i\}), \text{ for every } i \in N.^{[103]}$$

Individual rationality means that no player can unilaterally defect from the coalition and guarantee itself a more advantageous outcome.[104] In other words, we can expect that players that have the power to veto outcomes that are not in their individual best interests will do so. In a class action game in which players have potentially greater recoveries outside of the class action, defining the rules pursuant to which a player can successfully obtain those

---

[100] *See* Hylton, *supra* note 89, at 502; Wiley, *supra* note 89, at 558. Core theory cannot predict which of several solutions in the core will be the actual result of the parties' negotiations, nor can it predict what will happen if the core is empty. *See id.* at 561. In the former case, the actual result in any particular case will depend on a variety of considerations, such as the bargaining skills of the parties, relative levels of risk aversion, or wealth effects. In the latter case, the parties might continue to bargain at great length before arriving at some resolution or might respond to social, cultural, or institutional restraints that stifle continued bargaining but are not captured in the game. *See id.* Inefficiencies of this sort might be limited by restrictions on recontracting. *See id.*

[101] The characteristic function expresses the payoff each player or coalition expects to obtain from pursuing a particular strategy. *See* SHUBIK, GAME THEORY, *supra* note 89, at 128; *see also* MORTON D. DAVIS, GAME THEORY: A NON-TECHNICAL INTRODUCTION 180-81 (rev. ed. 1983). In a class action these strategies might include defecting from a coalition to pursue an individual action or opposing class certification.

[102] *See* H.A. Michner et al., *Do Outcomes of N-Person Sidepayment Games Fall in the Core?*, *in* COALITIONS AND COLLECTIVE ACTION 269, 270-71 (Manfred J. Holler ed., 1984).

[103] *See id.* at 270.

[104] *See* ORDESHOOK, *supra* note 89, at 340.

values will have a significant effect on the players' strategy options and on the potential stability of the class mechanism.

Consider the effect of a rule, like the opt-out rule, that permits any player to block a solution that encompasses all potential class members. In a situation in which every player is a potential veto player it may be significantly more difficult to form a stable class coalition that is resistant to defections. By contrast, if a majority of players is required to block a global solution, individual players have no power. Instead, that power shifts to potential intermediate coalitions. Such games may be more stable because a majority of the players must expect that they will increase their recoveries outside of the class action.

The second condition for core is that a payoff be *collectively rational.* This condition is satisfied if

$$\sum_{i \in N} xi \geq v(N).^{105}$$

This condition amounts to a requirement that the payoff to the parties be pareto-optimal.[106] In order for any solution to be in the core with respect to the grand coalition, that coalition must distribute the entire fund to all of the players.[107] Suppose that each player in a three-person game can ask for some portion of a settlement fund *M.* These strategies (X_1, X_2, and X_3) will all lie between zero and *M.* No player will rationally ask for less than zero. The other players will reject any proposal for more than the total sum of *M* because that would imply a negative payoff to them. Similarly, the players will not agree to distribute less than the total of the fund because there will be some other distribution scheme that makes at least one player better off without making any other players worse off. As a result, an efficient division of *M* must satisfy the condition: $X_1 + X_2 + X_3 = M.$[108]

---

[105] *See* Michner et al., *supra* note 102, at 271.

[106] *See* SHUBIK, GAME THEORY, *supra* note 89, at 141.

[107] *See* ORDESHOOK, *supra* note 89, at 341.

[108] *See* GARDNER, *supra* note 88, at 328. In reality, settlement funds sometimes have excess amounts that have not been distributed to claimants at the end of a given time period. *See* Margaret A. Jacobs, *Dalkon IUD Fund Plans Distribution of Last $1 Billion*, WALL ST. J., Oct. 3, 1995, at B16 (noting that surplus in *Dalkon Shield* claimants fund was to be distributed to claimants who had already obtained some recovery from the claims resolution facility); *Dalkon Trust to Pay $800 Million*, N.Y. TIMES, Oct. 4, 1995,

The final condition, *coalitional rationality*, is an extension of the logic of individual rationality.[109] A particular payoff structure is coalitionally rational if

$$\sum_{i \in S} x_i \geq v(S), \text{ for every } S \subset N.^{[110]}$$

What this condition means is that a payoff will lie within the core of a game if the outcome is rational from every coalition's perspective.[111] If any intermediate coalition has the ability to defect from a coalition to obtain a preferred result, then that payoff is not within the core and the coalition will tend to be unstable. Taken together, these three conditions demonstrate that the core of a game in characteristic function form is the set of undominated, feasible outcomes.[112] Every intermediate coalition and individual must strictly prefer the outcome in a given coalition to any other outcome that it can achieve.[113]

Demonstrating whether a core exists in a three-person game is easily accomplished using simple set theory to compare the payoffs available to the players for the two available strategies: stay in the grand coalition or defect.[114] Again, a core exists if each player strictly prefers maintaining the grand coalition of {1, 2, 3} to pursuing individual actions or intermediate coalitions composed of subsets of the grand coalition. In terms of set theory, the payoffs available in the grand coalition must satisfy 2^n-1 inequalities because this is the number of alternative coalitions that can be formed from the set of N players.[115] These inequalities correspond to the conditions of individual rationality, collective rationality, and coalitional rationality outlined above. Specifically, for a core to exist, the value of the expected recovery of

---

at D16 (same); *Deadline Is Eased on Agent Orange Claims*, N.Y. TIMES, Jan. 1, 1995, at 25 (noting that surplus of $21 million in Agent Orange compensation fund led court to extend the date by which claims could be filed against the fund). There are a number of factors that may contribute to such surpluses. First, it may be difficult to locate all potential claimants. Second, administrators of a claims resolution facility may undercompensate early claimants due to concerns about potential shortfalls, resulting from either an inability to identify nonmeritorious claimants or a fear that the amount of the fund was based on unrealistically low projections about the number of claimants. Finally, rational apathy may prevent small claimants from seeking recovery.

[109] *See* ORDESHOOK, *supra* note 89, at 340.

[110] Michner et al., *supra* note 102, at 271.

[111] *See* ORDESHOOK, *supra* note 89, at 340.

[112] *See id.* at 341.

[113] *See id.* at 340-41.

[114] *See* GARDNER, *supra* note 88, at 395-401.

[115] *See id.* at 398; Herbert E. Scarf, *The Core of an N Person Game*, 35 ECONOMETRICA 50, 51 (1967).

each singleton or intermediate coalition must be less than the value that the coalition members would receive if they remained in the grand coalition.

If U_1, U_2, and U_3 represent the payoffs Players 1, 2, and 3 would receive in the grand coalition, then a core will exist only if the following inequalities are satisfied:

$$v(\{1\}) \leq u_1$$
$$v(\{2\}) \leq u_2$$
$$v(\{3\}) \leq u_3$$
$$v(\{1, 2\}) \leq u_1 + u_2$$
$$v(\{1, 3\}) \leq u_1 + u_3$$
$$v(\{2, 3\}) \leq u_2 + u_3$$
$$v(\{1, 2, 3\}) \leq u_1 + u_2 + u_3.$$[116]

Before turning to a more rigorous application of these core theoretic principles to class action litigation, it is important to note some basic observations that derive from these mathematical principles. First, the requirement that $2^n - 1$ inequalities must be satisfied for a core to exist is critical because it emphasizes the exponential consequences of complexity and heterogeneity in the management of class action litigation. The larger n is, the more conditions will have to be satisfied to find a core. In a three-person bargaining game, seven inequalities have to be satisfied to find a core. If n is four, however, the number of inequalities jumps to fifteen. As more and more players are added, the likelihood of finding a solution that satisfies all of them becomes significantly smaller. Thus, one way to create a core is to decrease the number of different constituencies that have to be satisfied.

Second, the ability to create a core will depend heavily on the value of the payoffs available outside the class coalition. If one or more players think they can get a better deal outside of the class action they will opt out, if they are

---

[116] The set theory outlined above provides a simple sufficient condition for core in a 3-person game with side-payments that highlights the importance of intermediate coalitions:

$$v(\{1, 2\}) + v(\{1, 3\}) + v(\{2, 3\}) \leq 2M.$$

See GARDNER, *supra* note 88, at 401. This condition is arrived at by taking the sum of the inequalities for the three possible intermediate coalitions:

$$v(\{1, 2\}) + v(\{1, 3\}) + v(\{2, 3\}) \leq 2(u_1 + u_2 + u_3).$$

If a fixed amount is available to all of the players whether they opt out of the class action or not, then M can be substituted for the sum of the utilities. *See id.*; *see also* SHUBIK, GAME THEORY, *supra* note 89, at 147. This condition basically provides that if the two-person coalitions do not have outside options that are too large, then there is some solution within the core. *See* GARDNER, *supra* note 88, at 401; SHUBIK, GAME THEORY, *supra* note 89, at 147.

given the ability to do so. The number of players who may potentially defect may be increased if one player with a higher outside option can transfer some portion of its payoff (utility) to another player.[117] The Majority Voting Game is an example of such a game because the players could transfer among themselves portions of the political power they would jointly hold in a ruling coalition.[118] In game theoretic parlance, these transfer payments are known as sidepayments.[119] Games with sidepayments are important because they will tend to have solutions that fall outside of the core.[120] In other words, these games will tend to be less stable than games without sidepayments. Sidepayments become crucially important in modeling class action litigation because they provide a ready means for demonstrating some of the important dynamics of class action bargaining that may occur when opt-out rights are permitted.[121] To create a core, it may be necessary to restrict sidepayments.

Third, whether and to what extent a core will exist in a class action depends crucially on the rules that determine whether putative class members have the ability to defect from the coalition to attempt to obtain alternative payoffs. Simply put, games will tend to lack stability when players have the ability to pursue better options, which will be a function of the rules of the game.[122] If class members have an unlimited ability to defect from a class coalition, then it will become significantly harder to find a solution within the core. If defections are limited in some fashion, then a core solution may be more likely. If a class action has an empty core, then no global resolution of the class action is possible because class members will have both the ability and the incentive to defect from the class coalition.

IV. APPLYING CORE THEORY TO CLASS ACTIONS

The principles drawn from core theory provide an exceedingly useful tool for formally analyzing the causes of instability in class actions. To see how core can be used in this fashion, this Part creates a simple three-person bargaining model of a class action. The model is first used to demonstrate how core theory confirms the traditional rationale for employing mandatory class

---

[117] *See* Michner et al., *supra* note 102, at 270.
[118] *See supra* note 88 and accompanying text.
[119] *See* Michner et al., *supra* note 102, at 270.
[120] *See id.*
[121] *See infra* Part IV.C.
[122] *See* Wiley, *supra* note 89, at 561.

actions in limited fund cases. More importantly, this discussion preliminarily demonstrates that it is possible to view the entire evolving structure of mass tort class action litigation and settlement as an exercise in imposing constraints sufficient to force the inequalities necessary for finding a core to be satisfied. Various strategies courts have experimented with can all be explained as attempts to decrease sufficiently the value of outside options so as to create a core and thereby to facilitate a global class resolution.

This Part also tests various justifications offered for opt-out rights. Application of the model raises significant concerns about the "market check" rationale for permitting opt-outs.[123] Core theoretic principles demonstrate that opt-outs act as a poor filter in this regard because under certain conditions parties may not opt out even if a proposed class action settlement is inadequate, and may opt out even when faced with an adequate settlement. Finally, the core theoretic model is used to demonstrate how opt-out rights can become powerful bargaining tools and can shift power dramatically within the class action.

A. A Basic Class Action Model

This Article uses a simple class action model that is quite similar to the Majority Voting Game[124] to formalize some of the intuitions concerning the effects and benefits of granting or denying opt-out rights. Like all game theoretic models, the model employed here greatly simplifies the dynamics of class action litigation. The court has before it a request to certify a class action. The court has determined that class certification is appropriate and now must decide whether to certify a mandatory class action pursuant to Federal Rule of Civil Procedure 23(b)(1)(B) or an opt-out class action pursuant to Federal Rule of Civil Procedure 23(b)(3). The class consists of three members, or Players, 1, 2, and 3. Defendant has agreed to settle the class action, if

---

[123] *See supra* notes 70-72 and accompanying text.

[124] *See supra* note 88 and accompanying text.

certified, for a sum of money M equal to $600.[125] This sum equals the total amount of the defendant's assets.

In deciding the certification issue, the court will take into account the likely strategic responses of the parties should it certify an opt-out class action. In such an action, the parties have two potential strategies, remain in the class or opt out.[126] The model assumes that the players who will be making the strategic decision about whether to opt out of the class are profit-maximizing, entrepreneurial plaintiff's attorneys.[127] In this simplified model, each attorney is paid on a contingency basis and maximizes its fee award by maximizing the recovery to its client.[128] Each player's only interest when choosing between alternative strategies is to maximize utility,[129] which in this model is measured exclusively in terms of increasing the total amount of the client's

---

[125] When multiple decisionmakers are present, there may be strong conflicts concerning the settlement structure, the procedural protections that will be applicable to particular groups of claimants, the procedures for determining individual allocations, and the like. *See* McGovern, *supra* note 64, at 680-82. For example, in the Third Circuit's recent decision in *Georgine v. Amchem Products, Inc.* to decertify an asbestos class action, the court pointed to significant conflicts that are likely to arise between present and future claimants with respect to the terms of any settlement. 83 F.3d 610, 630-31 (3d Cir.), *cert. granted sub nom.* Amchem Prods., Inc. v. Windsor, 117 S. Ct. 379 (1996). Present claimants may seek to maximize current payouts under any settlement, may care little for inflation protections, and may want to limit future opt-outs to the extent that such limitations increase the chance that defendants will agree to the settlement. *Id.* at 631. By contrast, future claimants may want to reduce current payouts so that the fund is preserved, may seek to put in place inflation protections, and might desire a delayed opt-out right that would allow them to pursue a tort remedy if the settlement award proved to be less than they could obtain in a tort action. *Id.* at 630. These conflicts counseled against class certification "[a]bsent structural protections to assure that differently situated plaintiffs negotiate for their own unique interests. . . ." *Id.* at 631. Although some of these structural issues are beyond the scope of this Article, others can quite easily be explained using core theoretic principles. As noted previously, the Supreme Court has granted certiorari in *Georgine* to consider the requirements for certification of a settlement class action. *See supra* note 2.

[126] In the real world, opposing class certification is another strategy option. The choice between these two strategies is likely to depend on a player's assessment of the relative likelihood that a given strategy will permit defection from collective treatment. *See* WEINSTEIN, *supra* note 4, at 135 (noting that it is sometimes easy for parties in mass tort cases to defeat class certification).

[127] This assumption comports with the majority of class action practice. *See* Coffee, *Entrepreneurial Litigation*, *supra* note 4, at 882-89, 890-904; Macey & Miller, *supra* note 64, at 7-8.

[128] The law and economics critique of class actions has forcefully demonstrated that a plaintiff's attorney's incentives may not be so well aligned with those of its clients. Particular fee structures may create significant misincentives and agency costs in class action litigation. *See, e.g.*, Coffee, *Entrepreneurial Litigation*, *supra* note 4, at 887-89; Coffee, *Understanding the Plaintiff's Attorney*, *supra* note 64, at 669-70; Grundfest & Perino, *supra* note 29, at 565-67; Macey & Miller, *supra* note 64, at 22-23. Although these agency costs are real and may exacerbate some of the problems modeled here, the core theoretic model demonstrates that the existence of the problems observed in class action litigation does not depend on the presence of agency costs. *See infra* Part V.A.

[129] *See* ERIC RASMUSEN, GAMES AND INFORMATION: AN INTRODUCTION TO GAME THEORY 22 (1989).

individual recovery. Players are assumed to have no ideological interests that will affect their valuation of particular alternatives.[130]

This core theoretic model, while admittedly simplified and reductionist, is sufficient to generate many, if not all, of the phenomena observed in class litigation. The model demonstrates that a core will exist in an opt-out class action only if the putative class members can find an allocation of *M* that will make each party better off by remaining in the class action than by exercising its option to opt out of the class action. If some other coalition or individual can increase its recovery by opting out of the class action, then it can block any solution to the game that encompasses all the players.[131] To be sure, the model is unlikely to duplicate precisely the kinds of interactions that exist in the real world.[132] The model does, however, provide a formal framework for evaluating the tensions underlying the grant of opt-out rights in class actions.[133]

Using only three players,[134] the model captures much of the complexity of class actions and demonstrates many of the factors that contribute to unstable class coalitions. A three-person model permits an analysis of the conditions under which intermediate coalitions may form and an assessment of the significant impact that such coalitions may have on the manner in which a

---

[130] These assumptions are likely to reflect to a significant degree much of class action litigation, but they are by no means absolutes. For example, it is possible that some parties might define an optimal strategy as one that maximizes something other than monetary return to the individual plaintiff. A plaintiff may be more interested in a public apology from the defendant or wide publicity concerning the defendant's alleged misdeeds, goals which may be inconsistent in the particular case with maximizing monetary recovery. Nonetheless, maximizing monetary recovery is most likely a dominant real-world strategy for the majority of players in the class action game.

[131] *See* Scarf, *supra* note 115, at 50.

[132] In class actions there may be many reasons why negotiations might not follow this pattern. Certainly, in a world of incomplete and imperfect information, the players may not be able to assess accurately the exact value of their exit options. To the extent that the model assumes that players respond to credible threats and ignore incredible ones, it cannot predict the outcome of every case, but rather suggests what the outcome over a significant range of similar cases should be. *See* Douglas G. Baird & Randal C. Picker, *A Simple Noncooperative Model of Corporate Reorganizations*, 20 J. LEGAL STUD. 311, 332-33 (1991).

[133] *See* BAIRD ET AL., *supra* note 28, at 221.

[134] The model assumes that the attorneys are the actors who make the strategic decisions. In this regard, the three players can thus be thought of as subclasses of claimants within the class action. The players can be seen as amalgamations of individual claimants represented by the same profit-maximizing, entrepreneurial attorney that manages its portfolio of claimants to achieve the best possible recovery. *See* Coffee, *Class Wars*, *supra* note 4, at 1365; Coffee, *Entrepreneurial Litigation*, *supra* note 4, at 879. This kind of management may include pursuing a single overall strategy for the group. *See* Coffee, *Class Wars*, *supra* note 4, at 1365. In game theory, multiple players who pursue the same strategy can be treated as one player. *See* SHUBIK, GAME THEORY, *supra* note 89, at 18.

class action is resolved. It also provides valuable insights into the kind of give-and-take bargaining that is likely to occur among class plaintiffs. The model can easily be extended to *n* players, thereby making it much more complex. As has been shown previously, however, adding more parties to the game would simply cause the conditions necessary for finding a core to grow exponentially.[135] The three-person model is more than sufficient to demonstrate just how difficult it may be to find a core in a class action.[136]

The model's constant sum assumption permits it to isolate the strategic choices presented to class members concerning whether to pursue aggregative processes and the negotiation between different members of the class as to the portion of the settlement that each will receive. To do that, it is first necessary to hold constant another dynamic process that is likely to be ongoing at the same time—the negotiations between the plaintiffs and the defendant over the size of the proposed settlement. This latter process certainly has a profound effect on class action dynamics, and the model does not seek to suggest otherwise.[137] Instead, it focuses on the effect that strategic interactions among putative class members are likely to have on the ability to achieve global class action settlements. Application of core theoretic principles to these strategic interactions allows this Article to highlight many of the important forces that underlie the difficulties exhibited in many mass tort class actions.

B. Limited Funds and Mandatory Classes: How to Make a Core

The mandatory class action is seen as the most extreme example of collectivized mass tort procedures. As such, it provides an excellent starting point for applying core theory to the analysis of class actions because the results of core theory can be compared to the traditional rationales for certifying mandatory class actions. Moreover, mandatory classes are emblematic of other collectivized procedures that are used in mass tort litigation to decrease the likelihood that significant opt-outs will destroy the efficacy of global settlement. By analyzing how a core is created in mandatory classes, we can begin

---

[135] *See supra* notes 115-16 and accompanying text.

[136] *See* SHUBIK, GAME THEORY, *supra* note 89, at 20 (comparing the "parallel" two-person game to the more complicated three-person game).

[137] *See* BAIRD ET AL., *supra* note 28, at 195 (noting that "[s]orting out the relationships between the litigation game and the other aspects of the interactions between the parties is especially difficult in cases such as class actions, in which there may be multiple plaintiffs or multiple defendants").

to see that all of these techniques (including imposing costs on opt-outs and settlement class actions) are merely variations on the same theme. All are attempts to find a solution that satisfies the 2^n - 1 inequalities that must be satisfied in order to find a core and achieve a global class action resolution.

We can initially test the explanatory power of core theory by seeing whether it confirms the traditional justifications for denying opt-out rights in limited fund cases certified under Rule 23(b)(1), i.e., that mandatory classing helps to alleviate the collective action problem that arises when too many claimants are chasing after too few assets.[138] In fact, core theory jibes well with the theoretical underpinnings of the limited fund doctrine because it demonstrates that in cases involving a fund that is insufficient to compensate all claimants, opt-out rights provide claimants competing for a common pool with a method for imposing significant externalities on other claimants.

To see this, we employ the basic class model in which the defendant has a total of $600 in assets, all of which will be used to satisfy claims against it. If each player remained in the class, it would obtain a recovery (U_i). The players expect that their recoveries in the class action will be: U_1 = $300; U_2 = $60; U_3 = $240.[139] Each player expects that if it could opt out of the class action, then it would be able to obtain a complete recovery for all of its injuries. In this case, the payoff from opting out is 25% higher than the payoff from remaining in the class action, such that: v({1}) = $375; v({2}) = $75; v({3}) = $300.[140] This scenario represents a classic limited fund case be-

---

[138] *See* Phillips Petroleum Co. v. Shutts, 472 U.S. 797, 820 (1985); FED. R. CIV. P. 23(b)(1)(B) advisory committee's note; *see also supra* notes 39-43 and accompanying text.

[139] The actual division among the class members will depend on a number of variables, including the strength of their claims, the extent of alleged injuries, the substantive rules of tort recovery, the players' bargaining skill and aversion to risk, and any legally relevant factors. In any given case, a court may approve a range of different distribution proposals because it would not likely have or be willing to impose its own rigid view of the optimal distribution, particularly when it has incomplete information concerning all of the factors upon which an assessment of the optimal distribution can be made. For purposes of demonstrating some of the potentially destabilizing forces at work in class actions, arriving at an exact calculation of the manner in which class members will choose to allocate a fund is unnecessary. It is sufficient to assume for analytical purposes that the parties would agree and the court would approve some division of the $600, such as the one suggested in the text.

[140] In practice, determining payoffs for the two strategies of remain in the class action or opt-out can become complicated. Assessment of the expected payoffs will turn on factors similar to those a plaintiff would consider in determining whether to settle a case. *See* Stephen M. Bundy, *Commentary on "Understanding* Pennzoil v. Texaco*": Rational Bargaining and Agency Problems*, 75 VA. L. REV. 335, 337 (1989); Richard A. Posner, *An Economic Approach to Legal Procedure and Judicial Administration*, 2 J. LEGAL STUD. 399, 417-20 (1973); George L. Priest & Benjamin Klein, *The Selection of Disputes for Litigation*, 13 J. LEGAL STUD. 1, 4 (1984). As with settlements, a class attorney will choose the alternative that provides

cause the assets available to compensate claimants do not fully compensate the players.[141]

Absent the mandatory class, core theory predicts that these kinds of cases will be unstable because none of the inequalities necessary for finding a core is satisfied. The value that each player expects from opting out is greater than the recovery each would obtain in the grand coalition.[142] As a result, the condition of individual rationality dictates that each singleton will strictly prefer opting out of the class action to remaining a member of the class.[143] The payoff that each intermediate coalition expects from choosing the defection strategy is similarly greater than the payoff from maintaining the grand coalition. The value of these intermediate coalitions is: $v(\{1, 2\}) = 450$; $v(\{1, 3\}) = 675$; $v(\{2, 3\}) = 375$. Given the previously defined sufficient condition for finding a core, $v(\{1, 2\}) + v(\{1, 3\}) + v(\{2, 3\}) \leq 2M$,[144] we can see that the intermediate coalitions' claims are simply too large for a core to exist:

$$450 + 675 + 375 \leq 1200$$
$$1500 \leq 1200.$$

---

her with the most value. *See* Priest, *supra*, at 4. If the opt-out question arises in conjunction with a proposed settlement, as often is the case in class action litigation, the class attorney will determine the amount she expects to recover from the class, which may be subject to a contingency fee arrangement or may have to be approved by the court. The attorney will compare this amount to the expected judgment in an independent lawsuit, which will be the product of the probability of a favorable verdict and an estimate of the present value of that judgment. *See* Bundy, *supra*, at 337 n.5. To determine the expected gain from opting out, the attorney will subtract the expected litigation costs of pursuing the individual action from the expected judgment and add the expected costs of securing the class settlement that will be avoided. *See id.* In a world of incomplete and imperfect knowledge, none of these calculations is likely to be amenable to precise determination. *See id.*; Robert Cooter et al., *Bargaining in the Shadow of the Law: A Testable Model of Strategic Behavior*, 11 J. LEGAL STUD. 225, 232-33 (1982).

Another way to view these calculations is under an options pricing model. *See* Lucian Arye Bebchuk, *A New Theory Concerning the Credibility and Success of Threats to Sue*, 25 J. LEGAL STUD. 1 (1996); Bradford Cornell, *The Incentive to Sue: An Option-Pricing Approach*, 19 J. LEGAL STUD. 173 (1990). This theory, which has been used to explain the incentives to sue and the circumstances under which threats to sue are credible, can be extended to the decision to opt out of a class action.

[141] *See supra* note 39 and accompanying text; *see also In re* Joint E. & S. Dist. Asbestos Litig., 129 B.R. 710, 806 (E. & S.D.N.Y. 1991), *vacated on other grounds*, 982 F.2d 721 (2d Cir. 1992), *modified*, 993 F.2d 7 (2d Cir. 1993).

[142] *See* GARDNER, *supra* note 88, at 395-401. The unsatisfied inequalities are as follows: $v(\{1\}) = 375 \leq 300$; $v(\{2\}) = 75 \leq 60$; $v(\{3\}) = 300 \leq 240$.

[143] *See* ORDESHOOK, *supra* note 89, at 340.

[144] *See* GARDNER, *supra* note 88, at 401; SHUBIK, GAME THEORY, *supra* note 89, at 147.

Simply put, no intermediate coalition would prefer to remain in the class action and receive the available payoff when the payoff from defecting from the class is greater.[145]

As this is a constant sum game, it is readily apparent that all the players cannot simultaneously obtain the full amount of the expected payoffs to each singleton. There is only so much money to go around, and there are no strategies the parties can undertake to increase the size of the pot. In a case with a constant sum the last inequality necessary for finding a core, $v(\{1, 2, 3\}) \leq U_1 + U_2 + U_3$, is actually an equality, $v(\{1, 2, 3\}) = U_1 + U_2 + U_3$, that must be satisfied.[146] This means that if all the players opt out of the class action, then the most that they can obtain in the aggregate is $600.[147] Of course, this condition says nothing about what each player's share of the $600 will be. A common pool problem arises because the presence of higher outside options creates an overlapping distribution of rights when acquisition (here, through obtaining and executing on a judgment before the pool is depleted) creates an absolute priority of ownership.[148] Assuming that each player has a similar ability to defect, the likely result is that each player will seek to obtain the earliest judgment so that it can recover the full amount of its claim. In other words, there will be a classic race to judgment with each claimant seeking to assert dominion over its full share in the common pool of assets. This is precisely the situation that mandatory class actions were designed to avoid.[149]

The mandatory class action works in much the same way as bankruptcy to solve this collective action problem.[150] In core theoretic terms, both procedures alleviate the problem because they eliminate the opportunity to engage in individual litigation. In so doing, both procedures also eliminate any value that can be derived from defecting from the grand coalition.[151] A core exists

---

[145] *See* ORDESHOOK, *supra* note 89, at 340 (noting that for solution to be within core it must be rational from the perspective of every possible coalition).

[146] *See* GARDNER, *supra* note 88, at 401. In the model, the defendant has paid a maximum amount of $600. By definition, there is no strategy the players can follow that will enable them to obtain more than the $600.

[147] *See id.*

[148] *See* Picker, *supra* note 30, at 647.

[149] *See In re* Drexel Burnham Lambert Group, Inc., 960 F.2d 285, 292 (2d Cir. 1992); *In re* Bendectin Prods. Liab. Litig., 749 F.2d 300, 305-06 (6th Cir. 1984); Cutler v. 65 Sec. Plan, 831 F. Supp. 1008, 1020-21 (E.D.N.Y. 1993); FED. R. CIV. P. 23(b)(1)(B) advisory committee's note.

[150] *See* Baird & Picker, *supra* note 132, at 315.

[151] *See* Wiley, *supra* note 89, at 561; *see also* Coffee, *Entrepreneurial Litigation*, *supra* note 4, at 908

because the payoff to players in each singleton and intermediate coalition is zero, which is less than the payoff available through the grand coalition.[152] A player could defect from the grand coalition simply by refusing to participate in the mandatory class action, but such an action would be irrational because the player would obtain a payoff of zero. As a result, mandatory classing creates a kind of enforced stability in which coalitional rationality is created by making the coalition the only available strategy for obtaining a payoff.

The class action model and the principles of core theory it illustrates thus support the traditional application of mandatory classing to situations where a defendant's assets are clearly insufficient to satisfy the claims against it. Similarly, core theory demonstrates that mandatory classing may have a broader utility because the same ability to impose externalities on other claimants exists in any class action involving a constant sum where players have potentially more valuable outside options. Put another way, core theory provides formal support for the observations a number of courts and commentators have made that a compromise collective procedure through which claimants are given the right to pursue individualized litigation may not be viable.[153]

Constant sum cases raise the specter of significant collective action problems that may create unstable coalitions, regardless of whether that sum is sufficient to compensate fully all competing claimants. To see this, consider the following revised example in which there is again a sum certain of $600 to be divided among Players 1, 2, and 3. This time, there is no dispute that the sum is sufficient to compensate all three class members for the full extent of their alleged injuries. There are no other injured parties that would be entitled to compensation from the defendant. The players expect that their

---

n.73 ("The standard solution to a 'common pool' problem in the oil and gas industry has been compulsory unitization, and the mandatory class action is a functional analogue to this strategy.").

[152] A mandatory class action creates the following inequalities:

$$v(\{1\}) = 0 \leq u_1$$
$$v(\{2\}) = 0 \leq u_2$$
$$v(\{3\}) = 0 \leq u_3$$
$$v(\{1, 2\}) = 0 \leq u_1 + u_2$$
$$v(\{1, 3\}) = 0 \leq u_1 + u_3$$
$$v(\{2, 3\}) = 0 \leq u_2 + u_3$$

See GARDNER, *supra* note 88, at 395-401.

[153] *See* Rabin, *supra* note 1, at 1042.

recoveries in the class action will be: U_1 = \$300; U_2 = \$60; U_3 = \$240. Player 3 expects to be able to recover \$300 if it is able to pursue an individual action.[154] Players 1 and 2 expect no greater recovery from individual actions.

Although the problem is somewhat artificial, there is at least a strong possibility that under the prevailing legal precedents the court may not certify a mandatory class action.[155] The ability to certify a mandatory class may be difficult given both the strict standards some courts have established for finding the existence of a limited fund and the evidentiary difficulties likely to be encountered in a pretrial setting.[156] Mass tort cases present even greater difficulties because of the strong presumption in favor of maintaining litigative autonomy in cases involving personal injury.[157] In any event, no limited fund would seem to exist in the hypothetical case because the defendant's assets are by definition sufficient to compensate fully all claimants for their injuries. Likewise, under the abbreviated facts presented, there appears to be no punitive damages overkill theory or a limited fund of insurance proceeds that could support certifying a mandatory class.[158] For these reasons, if the court certifies a class action at all, then it is likely to do so only under Rule 23(b)(3).[159]

---

[154] *See infra* notes 257-63 and accompanying text for a discussion of the kinds of factors, other than those related to the merits, that may cause an individualized jury award to be greater than a class action settlement recovery.

[155] Given the tenor of recent appellate cases, class certification might be deemed inappropriate. *See supra* notes 54-63 and accompanying text.

[156] *See, e.g., In re* School Asbestos Litig., 789 F.2d 996, 1005 (3d Cir. 1986); *In re* Bendectin Prods. Liab. Litig., 749 F.2d 300, 306 (6th Cir. 1984); *Dalkon Shield*, 693 F.2d 847, 851-52 (9th Cir. 1982); Jenkins v. Raymark Indus., 109 F.R.D. 269, 276 (E.D. Tex. 1985) (finding no substantial probability of the existence of a limited fund because the estimated settlement value of the class was less than available insurance coverage), *aff'd*, 782 F.2d 468 (5th Cir. 1986); Coburn v. 4-R Corp., 77 F.R.D. 43 (E.D. Ky. 1977), *mandamus denied sub nom.* Union Light, Heat & Power Co. v. United States Dist. Court, 588 F.2d 543 (6th Cir. 1978); *but see Cutler*, 831 F. Supp. at 1020 (noting that mandatory classing "is particularly appropriate where class members have claims against a fund whose assets may prove insufficient to satisfy all of them"); *In re* "Agent Orange" Prods. Liab. Litig., 100 F.R.D. 718, 726 (E.D.N.Y. 1983), *mandamus denied sub nom. In re* Diamond Shamrock Chems. Co., 725 F.2d 858 (2d Cir. 1984), *and aff'd*, 818 F.2d 145 (2d Cir. 1987); McGovern, *supra* note 64, at 667.

[157] *See supra* note 63 and accompanying text.

[158] *See In re* A.H. Robins Co., 880 F.2d 709 (4th Cir. 1989); *Jenkins*, 109 F.R.D. at 276; *In re "Agent Orange,"* 100 F.R.D. at 724. If class members reside in different states and there appear to be no minimum contacts with the forum state, a court attempting to certify a mandatory class would also face the thorny jurisdictional problem raised in *Phillips Petroleum Co. v. Shutts*, 472 U.S. 797 (1985). *See supra* note 24.

[159] *See, e.g.*, Jenkins v. Raymark Indus., 782 F.2d 468 (5th Cir. 1986); *In re* Copley Pharm., Inc., 161 F.R.D. 456 (D. Wyo. 1995).

The fact that the class is certified under Rule 23(b)(3) gives at least some class members the ability to pursue outside options that may have higher payoffs.[160] In this game, there is again no core for the three-person coalition {1, 2, 3} because the inequality $v(\{3\}) \leq \$240$ is not satisfied. The payoff Player 3 receives from defecting to form a single person coalition is greater than the payoff Player 3 receives from remaining in the grand coalition. Under these conditions, it will be rational for Player 3 to opt out of the grand coalition if it cannot be induced to stay.[161]

Player 3's action is likely to have a further destabilizing effect in this game because it is a constant sum game. If Player 3 obtains a $300 payoff, then only $300 remains to be split between Players 1 and 2 even though they would have received a payoff in the grand coalition of $360. Player 3's opt-out may change the payoff structure for Players 1 and 2, thereby causing them to re-evaluate the rationality of remaining in an intermediate coalition. Under these revised circumstances, Players 1 and 2 may also choose to defect from the coalition to pursue individual actions, if through such actions they expect to obtain the full amount of their claims or a greater amount than they expect to recover through class procedures. This cascading effect is akin to a bank run when the fact that some depositors have begun to withdraw their funds leads others to do the same.[162]

Again, even though the recoveries in the class action may have sufficiently compensated the claimants, the same kind of race to judgment that mandatory classing seeks to prevent can potentially exist. Essentially, the presence of a single opportunity to obtain a higher recovery in an opt-out class action with a constant sum may create a situation in which a class action becomes as unstable as the class in which the fund is inadequate to satisfy all claimants. The common pool problem remains because even with only one higher outside option, there is still an "overlapping distribution of rights."[163] In this kind of case, mandatory classing solves the tragedy of the commons problem by prohibiting claimants from exploiting assets to the greatest extent possible. Without mandatory classing, it is not individually rational for class members

---

[160] *See* Wiley, *supra* note 89, at 561.

[161] *See* ORDESHOOK, *supra* note 89, at 340. See *infra* Part IV.D. for a discussion of the circumstances under which other players might induce a player with valuable outside options to stay in the grand coalition.

[162] *See* FREDERIC S. MISHKIN, THE ECONOMICS OF MONEY, BANKING, AND FINANCIAL MARKETS 320-27 (1989); Douglas W. Diamond & Philip H. Dybvig, *Bank Runs, Deposit Insurance, and Liquidity*, 91 J. POL. ECON. 401, 401 (1983).

[163] Picker, *supra* note 30, at, 647.

to stay in the coalition. With opt-out rights, the coalition containing all three players has no core because each member of the class strictly prefers the outcome of opting out over the outcome of remaining in the class.[164]

This constant sum analysis applies to any common pool of assets and is not limited to situations in which claims are likely to equal or exceed defendant's assets. Indeed, consider a situation, like the breast implant litigation,[165] where a class action has been provisionally certified and there is a proposed global settlement. These settlements are, of course, usually less than the sum total of defendant's assets. In such a case, defendant's assets are not a constant sum that is less than or equal to the claims asserted; so a mandatory class action is unlikely to be certified unless the court is willing to certify a pool of insurance coverage as a limited fund, something only a few courts have been willing to do.[166] The fact that other assets may be available against which singletons or intermediate coalitions can proceed in an attempt to realize higher payoffs means that the players might have a good chance to obtain the higher recovery outside the grand coalition. Assuming transaction and agency costs are not a problem, in such a case a core may not exist for the grand coalition because the conditions of individual and coalitional rationality may not be satisfied.[167] All of the players with higher outside options will strictly prefer the higher recovery outside the class action, all will have a means to obtain that recovery, and all should rationally defect.

Global settlements may be viewed as constant sums. Core theory thus supports the intuition that preserving opt-out rights may reduce the prospects for negotiated class action settlements because it may be difficult for defendants to obtain global peace.[168] Of course, it might be suggested that the availability of higher payoffs through intermediate coalitions or singletons may indicate an inadequate or collusive settlement. In such circumstances, it has been suggested that the ability to opt out may act as an important procedural safe-

---

[164] *See* ORDESHOOK, *supra* note 89, at 340-41.

[165] This litigation is discussed below in Part V.B. *See infra* notes 236-38, 266-87 and accompanying text.

[166] *See In re* Asbestos Litig., 90 F.3d 963 (5th Cir. 1996); *A.H. Robins Co.*, 880 F.2d at 717-18.

[167] *See* ORDESHOOK, *supra* note 89, at 340; Michner et al., *supra* note 102, at 270-71.

[168] *See In re* Silicone Gel Breast Implant Prods. Liab. Litig., No. CV-92-P-100000-S, 1994 U.S. Dist. LEXIS 12521, at *17 (N.D. Ala. Sept. 1, 1994); WEINSTEIN, *supra* note 4, at 26, 136 & n.108; Coffee, *Class Wars*, *supra* note 4, at 1382-83; *see also* Rabin, *supra* note 1, at 1042 ("[I]t remains an open question whether and to what extent an exit mechanism—the opt-out—can be incorporated into the hybrid approach in a fashion that satisfies individual justice concerns yet avoids undermining the collective justice remedial system.").

guard.[169] Indeed, this safeguard is considered essential because the alternative protection afforded class members, rigorous judicial oversight of class action settlements, is seen as largely ineffective.[170]

There are a number of responses that can be made to this rationale for maintaining opt-out rights. First, appellate courts have recently demonstrated a renewed vigor in monitoring class action settlements.[171] Second, and more importantly from the perspective of core theory, opt-outs may not act as an effective market check for proposed settlements. As is demonstrated below, although higher payoffs outside the grand coalition may in certain cases be consistent with an inadequate settlement, core theory demonstrates that the invocation of opt-out rights does not necessarily correlate with inadequacy of recovery.

C. *The Opt-Out as a Market Check Against Inadequacy*

Opt-out rights can act as an effective market check against inadequate or collusive settlements.[172] In order for the opt-out right to perform this function, there needs to be a significant correlation between high numbers of opt-outs and inadequate settlements. Conversely, there should also be relatively few opt-outs in cases where the settlement is fair. Core theory suggests that these conditions do not hold with respect to many kinds of class action settlements. In many circumstances opt-outs will perform this market-checking function rather poorly, if at all. In some cases, inadequate settlements may not prompt class members to opt out. In other cases, class members may opt out even in the face of an adequate settlement. Thus, the strongest claim that can be made for opt-out rights in this regard is that they can, but need not, act as a market check on the fairness of a settlement.

---

[169] *See supra* notes 70-72 and accompanying text.

[170] *See* Alexander, *supra* note 64, at 566; Coffee, *Unfaithful Champion*, *supra* note 64, at 26-27; Macey & Miller, *supra* note 64, at 45-47.

[171] *See, e.g.*, Georgine v. Amchem Prods., Inc., 83 F.3d 610 (3d Cir.), *cert. granted sub nom.* Amchem Prods., Inc. v. Windsor, 117 S. Ct. 379 (1996); *In re* General Motors Corp. Pick-up Truck Fuel Tank Prods. Liab. Litig., 55 F.3d 768 (3d. Cir.), *cert. denied*, 116 S. Ct. 88 (1995).

[172] *See supra* notes 70-72 and accompanying text.

Under certain conditions, inadequacy[173] may not prompt the affected party to opt out because the crucial factors in determining if a stable coalition exists are whether players have the potential for obtaining a higher payoff from defecting and whether the rules permit class members to obtain that recovery.[174] The presence of potentially valuable outside options is not necessarily a product of an inadequate payoff through a coalition, if we use "inadequate" to mean that the payoff does not fully compensate the player based upon some objective, agreed-upon criteria. To be sure, the payoff inside the grand coalition may be inadequate, and the presence of such an inadequate payoff may prompt a player to opt out. But it will not be rational for a player to defect from a coalition even in the face of an inadequate payoff if the amount of any payoff the player would receive from forming a singleton or intermediate coalition would be less than the inadequate payoff in the grand coalition.[175]

Take for example Player 1 in the class action model.[176] Assume Player 1 expects a payoff of $100 from forming a singleton and opting out of the class action. Player 1 also expects a recovery of $125 from maintaining the grand coalition. The differences in the recoveries reflect the higher costs to Player 1 from pursuing an individual action. In such a case, the inequality $v(\{100\}) \leq 125$ is satisfied.[177] If the strategies available to Player 1 are opting out or remaining in the class coalition, then the condition of individual rationality dictates that Player 1 will remain in the class action.[178] Whether the $125 is adequate simply does not enter into the analysis. If the payoff to each singleton and intermediate coalition follows a similar pattern, then there will be a core for the class action consisting of all players. The conditions of individual

---

[173] The term "adequate" raises the question: "Adequate judged by what standards?" In mass tort class actions, significant issues may arise with respect to how different fora's substantive polices might lead to substantially different views concerning the measure of adequate compensatory or punitive damages. These differences can of course raise significant choice of law concerns in nationwide class actions alleging state law claims. *See* Phillips Petroleum Co. v. Shutts, 472 U.S. 797 (1985); *In re* Rhone-Poulenc Rorer, Inc., 51 F.3d 1293, 1294-1301 (7th Cir.), *cert. denied*, 116 S. Ct. 184 (1995). These issues are beyond the scope of this Article, which seeks instead to construct a simple formal model that highlights some of the potential factors, other than collusion or inadequate compensation, that can lead to class instability. In keeping with this goal, this Article will use "adequate compensation" to mean a recovery that is sufficient to make a plaintiff whole for all of its legally cognizable injuries under the appropriate legal standards.

[174] *See* Wiley, *supra* note 89, at 561.

[175] *See* ORDESHOOK, *supra* note 89, at 340.

[176] *See supra* Part IV.A.

[177] *See* GARDNER, *supra* note 88, at 395-401.

[178] *See* ORDESHOOK, *supra* note 89, at 340.

rationality and coalitional rationality will be satisfied regardless of how the payoff in the grand coalition compares to some objective measurement of adequacy.[179]

To be sure, a player might pursue strategies inside the class action to increase the potential recovery if such actions are cost-effective in comparison to the expected increased recovery.[180] But, at least in this case, opting out does not appear to be a viable strategy option, and we can expect that class actions of this sort will tend to be stable. An example of such a situation may be a classic "large-stakes, small-claims" class action, such as a consumer class action, where the transaction or opportunity costs associated with pursuing an individual action are greater than in the class action. Indeed, in the paradigm large-stakes, small-claims class action, the payoff to a singleton or intermediate coalition may effectively be zero because the fixed costs of litigation exceed the expected payoff, meaning that it will be irrational for any attorney to bring an individual case.[181]

By the same reasoning, core theory is consistent with the insight that opt-outs can also serve as a means for internal class conflict that may give coalition members strategies for realizing larger shares of the fixed assets available to compensate the class. In this situation, opt-outs may destroy the viability of a class action even if a recovery within the grand coalition appears to be adequate because of the prospect of large compensatory or punitive damages from sympathetic juries.[182] An adequate payoff through a grand coalition does not guarantee that a player will remain in the coalition. Indeed, if the value of the payoff through a singleton or intermediate coalition is greater than the payoff available through the grand coalition, the only rational thing for the player to do is to defect.[183] An objective observer might conclude that the proposed class recovery is more than sufficient under the relevant legal precedents, but such a conclusion will matter little to a player seeking to maximize the amount of its payoff. Core theoretic notions of individual and

---

[179] *See id.* For definitions of the conditions of individual and coalitional rationality *see supra* notes 101-13.

[180] *See* Grundfest & Perino, *supra* note 29, at 563-77.

[181] See *infra* Part IV.D. for a core theoretic analysis of such a situation. See *infra* Part V.B. for a real world analogue of such a situation.

[182] *See supra* note 66 and accompanying text.

[183] Again, the conditions of individual and collective rationality dictate that the players, as rational utility maximizers, will defect from the grand coalition. *See* ORDESHOOK, *supra* note 89, at 340; Michner et al., *supra* note 102, at 270-71.

coalitional rationality have little to do with the adequacy or inadequacy of a class recovery. Rather, the driving forces underlying unstable class actions are the presence of an inequality between the payoffs available through the grand coalition and payoffs available through smaller coalitions, and a strategy open to the players to obtain those alternative payoffs.

Whether under these conditions opt-out rights can function as an effective market check is subject to legitimate questioning. Again, this is not to say that inadequate or even collusive settlements as a byproduct of significant agency costs are not a problem in class action litigation. That proposition has been well established.[184] But the relative number of opt-outs in any given case may not be a reliable indicator that such an inadequate settlement has been proposed.

The presence of a mixed claimant population may also decrease the ability of opt-out rights to act as an effective indicator of adequacy. If some plaintiffs have sufficiently large stakes in the class action, then they may seek to opt out in the face of a settlement that gives them less than they could recover in an individual tort suit. But this does not necessarily constitute strong evidence that the settlement as a whole is unfair; it says nothing about whether the settlement is a fair allocation among all claimants, including small or future claimants who may have no practical ability to opt out.[185] Core theory suggests that to the extent the invocation of an opt-out right acts as a market test, it only tests whether the proposed settlement amount allocated to large claimants is equivalent to the baseline tort awards those claimants reasonably expect in individual actions. Significant opt-outs may simply be a manifestation of the common pool problem that may cause individual class members, driven by rational self-interest, to seek a disproportionately large portion of any potential recovery through pursuing individualized adjudication. In these cases, using opt-out rights as a check is at best an imperfect means of identifying or deterring inadequate settlements and collusion because it is overbroad and imprecise. Invocation of these rights may not sufficiently distinguish inadequate settlement cases from those cases where valuable outside options exist. Providing a system that permits each claimant to choose "the particular mix of collective and individual claiming that best

---

[184] *See supra* note 64 and accompanying text.

[185] *See* Cramton, *supra* note 12, at 824.

serves her wishes"[186] may simply maintain a system that permits collective action problems to flourish.

D. Bargaining in the Shadow of Opt-Out Rights

The credible threat to opt out of a class action can act as a powerful bargaining tool. This observation is particularly true with respect to high-stakes claimants who may have sufficient power to destroy the viability of a global class resolution. To be sure, this ability to credibly exit from the collective should give the claimants significant power in any negotiations with defendants. But for purposes of this Article it is more important to note that the ability to opt out can give these claimants significant bargaining leverage over other class members who do not have credible opt-out options. These conditions may prevail in a typical mass tort case because of the often disparate claimants that are cobbled together in a single class.

If a fixed sum is available from the defendant, then it is rational for a player with a higher outside option to opt out of a class action unless other players can induce it to stay. This observation is consistent with the notion that one purpose of aggregative litigation procedures is to provide competing claimants with a forum in which they can bargain for allocations of any recovery from the defendants. In this regard, class actions can act in a similar way to bankruptcy which, instead of being merely a vehicle to overcome collective action problems, may sometimes serve to frame negotiations between the firm's senior creditor and its management.[187] Indeed, bargaining over the allocation of M in the class action calls to mind a broader array of bargaining situations that are shaped by legal rules providing alternatives to the negotiators.[188] These legal rules are in essence "exit options" because they give one or more players the ability to cut short negotiations and receive some alternative payoff.[189]

---

[186] *See* Schuck, *supra* note 4, at 964.

[187] *See* Baird & Picker, *supra* note 132, at 311. Of course, this is exactly the situation in some mass tort cases in which the relevant defendants have filed for bankruptcy. For a description of the *Dalkon Shield* case, which demonstrates how the bankruptcy framed negotiations between the defendant and the plaintiffs, see McGovern, *supra* note 64, at 675-88. This Article argues that not only can the collectivized procedure frame negotiations between the defendants and the plaintiffs, it can also frame negotiations among the plaintiffs if some but not all plaintiffs have a credible exit option.

[188] *See* BAIRD ET AL., *supra* note 28, at 224; *see also* GARDNER, *supra* note 88, at 327-56, 382-409; RASMUSEN, *supra* note 129, at 227-44.

[189] BAIRD ET AL., *supra* note 28, at 221; *see also* Baird & Picker, *supra* note 132, at 319; John Sutton,

Whether and to what extent a party will exercise that exit option will depend on the strength of the option. The strength of the exit option will also determine whether the player possessing the option will derive any negotiating benefit from it. If the exit option is weak because the alternative payoff is less than the amount the player could otherwise obtain through bargaining, then the exit option will not affect the player's bargaining.[190] Any threat to resort to the exit option will not be credible. A player with a strong exit option will have a payoff alternative that is greater than the amount the player might otherwise be able to bargain for in the negotiations. In this case, the exit option will place a floor on the payoff the player must receive in a bargained-for agreement.[191] If it were offered any lesser amount, the player would simply exercise the exit option.

The concept of exit options can be readily tied to the theory of core by viewing the option as setting the conditions for individual and coalitional rationality.[192] With a strong exit option, a solution encompassing the grand coalition will be individually rational if the player receives at least as much as it would by defecting from the coalition. An alternative payoff may be so large that the other players will not agree to it, such as when the alternative payoff equals or exceeds the funds available. In this scenario, there will be no core for the grand coalition, the player with the strong exit option will cut off bargaining, and it will take the alternative payoff.[193] But if the exit option is not too large, the players with weak or no exit options may be able to transfer sufficient utility to the other player to keep it in the coalition. If so, a solution will be within the core of the game.[194] Such a situation might occur when a player with a strong exit option receives as much as it would through defecting and when, even after the transfers, the other players receive more than they would otherwise be able to obtain.

Bargaining in the shadow of exit options provides a ready analogue to class actions because opt-out rights are quite literally exit options. These rights technically give all players the ability to opt out to pursue a separate litigation and thereby to obtain some alternative payoff. The relative strength of the

---

Noncooperative Bargaining Theory: An Introduction, 53 REV. ECONOMIC STUD. 709 (1986).

[190] *See* BAIRD ET AL., *supra* note 28, at 226.

[191] *See id.* at 228; Baird & Picker, *supra* note 132, at 319.

[192] *See* ORDESHOOK, *supra* note 89, at 340; Michner et al., *supra* note 102, at 271.

[193] In a bankruptcy context this might occur when the senior creditor's secured claim exceeds the assets of the bankruptcy estate. *See* Baird & Picker, *supra* note 132, at 311-12.

[194] *See* GARDNER, *supra* note 88, at 401; SHUBIK, GAME THEORY, *supra* note 89, at 147.

opt-out rights will then "set the stage for the negotiations between the parties."[195] Players that expect a significantly greater return from an individual action have strong exit options. In a constant sum situation, these exit options give them the possibility of capturing a disproportionately large portion of the common pool. Indeed, in cases where a defined pool exists from which class members may recover and where the sum of the potential recoveries outside the class exceeds the amount in the defined pool, giving opt-out rights to the class members should create an unstable game without a core. In such a case, as already illustrated, each player will have a sufficiently strong exit option that there will be no bargain strictly preferable to exercising their opt-out rights.[196] Mandatory classing, taxing opt-outs, or other similar strategies can help prevent an unruly race to judgment because they take away or decrease the value of these exit options. A global class resolution is possible because these devices constrain litigants' bargaining strategies, thereby creating at least the possibility of finding a core. If there are no opt-out rights or opt-out rights are restricted, then the amount of expected recovery from an individual action may become irrelevant to bargaining and the players and the court can arrive at an equitable distribution of the funds available.[197]

Merely because there are opt-out rights does not mean it is impossible to achieve a core. Core theory does not suggest that any time coalition members have the power to form intermediate coalitions or singletons that coalitions will tend to be unstable. Such power is a necessary, but not a sufficient, condition for class instability. In a regime in which opt-out rights are available, the key issue for determining class stability is coalitional rationality.[198] It is only when the value of staying in the class exceeds the value of pursuing individual litigation that stable class actions are likely to emerge. If the expected recovery from opting out is less than the expected recovery from staying in the class, then opt-out rights will not affect the core.

As suggested previously, opt-out rights are unlikely to affect large-stakes, small-claims actions because if a player does not have a claim that is viable as an independent suit, then it is not individually rational for that player to leave the grand coalition.[199] But not all class actions fall within this para-

---

[195] Baird & Picker, *supra* note 132, at 320.
[196] *See supra* Part IV.B.
[197] *See* Baird & Picker, *supra* note 132, at 324.
[198] *See* ORDESHOOK, *supra* note 89, at 340.
[199] *See supra* Part IV.C.

digm.[200] Many class actions involve a mix of claimants, some of whom can expect to obtain only modest recoveries and others of whom have much larger damages claims. This heterogeneity increases n in the formula $2^n - 1$, thereby increasing exponentially the number of inequalities necessary to find a core. In these situations, the relative strength of the exit options the players possess will vary greatly. In other words, in these cases, while the right to opt out may be universal, the ability to do so will not be. As a practical matter, this means that smaller claimants may be at a significant disadvantage in recovering an amount sufficient to compensate them for their injuries, particularly when a constant sum is available. Adding in transaction or agency costs may exacerbate the problem.

To see this, we return to the first iteration of the class action model. The players expect that their recoveries in the class action will be: $U_1 = \$300$; $U_2 = \$60$; $U_3 = \$240$. Each player expects that if it could defeat the class action or opt out of it, it would be able to obtain an additional 25%, such that: $v(\{1\}) = \$375$; $v(\{2\}) = \$75$; $v(\{3\}) = \$300$. In this case, however, assume that the cost of opting out of the class action and pursuing an individual action is $40 greater than remaining in the class. The player is again the attorney, and she expects to recover one-third of the award, whether in the class action or in an individual action. In such a case, Players 1 and 3 will have an incentive to opt out because the cost of pursuing an individual action is less than the expected increased recovery. These players' expected recoveries exceed the constant sum available, so they will race to judgment. Player 2 has no viable opportunity to opt out because the expected gains from opting out are less than the cost of pursuing an individual suit. In the real world, Player 2's problems are likely to be compounded. With Players 1 and 3 pursuing individual actions, the defendant will likely have no incentive to enter into any settlement that includes only Player 2 because the defendant knows that Player 2 cannot bring an individual action. Player 2, the smallest claimant, may then be effectively precluded from pursuing any action.

This result arises in part because the class action device was designed to overcome the problem of dispersed injured parties whose claims were sufficiently small that they lacked the incentives or the ability to bring individual adjudication;[201] and it is now being applied in cases, like mass tort cases,

---

[200] *See* Grundfest & Perino, *supra* note 29, at 563-77; *see also* Coffee, *Entrepreneurial Litigation*, *supra* note 4, at 904-06.

[201] *See* Deposit Guar. Nat'l Bank v. Roper, 445 U.S. 326, 339 (1980); Benjamin Kaplan, *A Prefatory*

with a more mixed claimant population. In such cases, agency and transaction costs may give different subsets of claimants significantly different strategic alternatives. In a constant sum situation, those who do not have the ability to opt out of the class action may receive less than they otherwise would if those who have the ability to opt out can increase their recoveries by doing so. With a constant sum, any change in distribution of the fund will only be a reallocation. Any increase to one party who is able to exploit the opt-out rights comes at the expense of the other claimants who are not able to take advantage of those rights. Thus Player 2, the kind of small claimant that class actions are supposed to benefit, may find that it has no realistic way of obtaining any recovery for its injuries.

The exit option model, of course, demonstrates that these reallocations do not necessarily require that parties with the strong exit options actually exercise them. With exit options, large claimants or those that expect significantly larger recoveries outside the class action may have significant bargaining power because they possess a credible threat to opt out of the class to pursue an individual action.[202] In these cases, smaller or weaker claimants may tend to be systematically disadvantaged by a system of opt-out rights.[203] The credible threat to opt out of a class action may significantly affect the range of bargaining with respect to the distribution of any recoveries from the defendant.[204]

A useful way to think about these problems is to return to the class action model and give Player 1 a strong exit option while Players 2 and 3 have only weak ones. If Player 1 can obtain $v(\{1\})$, then that amount sets a floor to what Player 1 must receive to remain in the class.[205] If the other class members do not offer Player 1 at least that much, it will be rational for Player 1 to opt out and pursue a separate action.[206] Such a game may or may not have a core depending on how large Player 1's exit option is and the weakness of the other players' bargaining positions. In a case where Player 1 has

---

Note, 10 B.C. INDUS. & COM. L. REV. 497, 497 (1969); Macey & Miller, *supra* note 64, at 8; Schwarzer, *Structuring Multiclaim Litigation*, *supra* note 67, at 1252-53.

[202] *See* BAIRD ET AL., *supra* note 28, at 221.

[203] This is certainly true if transaction costs for defendants are greater when they must litigate individual cases rather than a single class action. If the defendant has only $600 available in total assets, any amounts paid to litigate cases will reduce the total amount available to claimants.

[204] *See* Baird & Picker, *supra* note 132, at 321.

[205] *See id.* at 319.

[206] This of course assumes that Player 1 is risk-neutral.

a somewhat strong exit option (but one that is less than the amount of the entire fund) and the other players have no option but to pursue class litigation, a core solution may be possible. If, for example, Players 2 and 3 expect that they can obtain a greater recovery in a class with Player 1 than they could if Player 1 defects, then Players 2 and 3 may be willing to transfer part of their recovery to Player 1 to induce it to stay in the class.[207]

Consider a case where, without exit options, each player expects to recover a bargained-for share of $200 out of the $600 fund *M*. Player 1, however, has a strong exit option and expects to recover $300. Pursuing the individual suit will require the defendant to expend $100 in legal costs, leaving only $200 for Players 2 and 3 to split. In this situation, it would be irrational for Players 2 and 3 to insist on a recovery of $200 each. If they do, Player 1 will simply exercise its exit option and recover $300. Assuming that Players 2 and 3 are similarly situated in terms of their bargaining position with respect to each other, the likely outcome will be that Players 2 and 3 will each give up $50 to keep Player 1 in the coalition. The value of Player 1's exit option sets a floor on the amount it will receive, and Players 2 and 3 will have to split whatever amount remains. If Players 2 and 3 have no opportunity for recovery outside a class action that encompasses all three players, they might be willing to enter into a bargain that gives Player 1 more than what it would have received by exercising its exit option.[208] Game theory cannot predict which of the distributions within a core, if one exists, the parties will ultimately choose and the court ultimately approve because the actual distribution will depend on player-specific characteristics such as bargaining skill, relative levels of risk aversion, and the like.[209]

The formal model provides theoretical support for the intuition that providing an unrestrained right to opt out of a class action as a way to maintain some semblance of litigative autonomy may impose significant costs on other claimants, especially when those claimants are competing for a constant sum. The model does not incorporate costs to the civil justice system that may arise from multiple, repetitive trials. In cases in which there is no constant sum and the defendant possesses assets sufficient to cover all jury verdicts or settlements, then the lack of a core for the grand coalition is not likely to

---

[207] This will be especially true in cases in which the defendant is unlikely to settle with a class that includes only the low value claimants.

[208] *See* Baird & Picker, *supra* note 132, at 322.

[209] *See id.* at 324.

impose costs on competing claimants in the form of reduced recoveries. Disaggregative strategies, however, are still likely to impose broader costs on the civil justice system to the extent that such costs are externalities to the players.[210]

V. REAL WORLD ANALOGUES

Core theory is not merely the stuff of game theoretic models. Indeed, it is possible to suggest tentatively that core theory can explain many, and perhaps all, of the phenomena observed in the real world of class litigation. This "core completeness conjecture" does not discount the existence of the kinds of agency costs that have been at the forefront of the academic assessment of class actions. These costs are real, but they may be explained as aspects of the core theoretic model and thus may be analytically unnecessary to explain the observed patterns that have emerged in class litigation. In other words, if the "core completeness conjecture" is correct, then core theory may be sufficient to explain completely class action dynamics.

This Article does not attempt to analyze exhaustively every aspect of class action dynamics in order to test thoroughly the validity of the core completeness conjecture. Instead, to explain how core theory can be used in this way, this Part takes a number of examples that are emblematic of real world class action phenomena and places them within the broader context of core theory. This Part also shows how the core theoretic model can be used to model agency problems. Additionally, it highlights an inherent paradox in class action litigation that makes the exercise of opt-out rights feasible predominantly in those cases where there is a significant likelihood that they may destroy the viability and efficiency of the class.

A. Core Theory and Agency Costs

Agency problems between lawyers and class members may not be necessary to explain class action dynamics. Similar phenomena to those observed in current class litigation and settlement practices may arise in cases in which lawyers faithfully represent the interests of all members of the class. To be sure, an attorney who represents only a subset of clients may implement a

---

[210] *See supra* notes 30-31 and accompanying text.

strategy designed to create a core by constraining some other subset's bargaining space. In this way, the lack of homogeneity within groups that can be aggregated as classes can create an intraclass loyalty and agency problem that can devastate traditional notions of equity and fairness. But those problems arise not because counsel is being an unfaithful champion of her clients' interests, but precisely because counsel is being absolutely faithful to her specific clients at the expense of other potential class members.

Before examining the intraclass loyalty problem, consider first a case in which counsel may be acting in the best interests of all potential claimants by seeking class certification in a mass tort case. In some of these cases, there may be significant agency cost problems leading plaintiff's attorneys to propose class actions to reap the fees associated with being named lead counsel or to settle the action cheaply.[211] But these attorneys may also be acting consistently with game theoretic concepts of core. In these cases the key is coalitional rationality. Attorneys may find it rational to pursue collective procedures when it is in the best interest of every singleton and intermediate coalition to do so. This idea is consistent with the behavior of attorneys who seek class certification in mass tort cases that generally have been unsuccessful as individual suits.

Consider *In re Rhone-Poulenc Rorer, Inc.*,[212] one of the recent cases in which an appellate court questioned the utility of mass tort class actions. In *Rhone-Poulenc*, Judge Posner refused to certify a nationwide mandatory class action brought on behalf of hemophiliacs infected with the AIDS virus from their use of certain blood solids that the defendant drug companies had manufactured.[213] Three hundred lawsuits involving approximately 400 plaintiffs had been filed in state and federal courts when the district court certified a mandatory class action.[214] That class would have involved significantly greater numbers than were represented in then pending cases. Indeed, the class counsel presented evidence that at least half of the United States' hemophiliac population (about 10,000 people) were HIV-positive.[215] At the time

---

[211] Macey & Miller, *supra* note 64, at 44-45. Indeed, certain mass tort attorneys have developed reputations as "quick settlers." Alison Frankel, *Et Tu, Stan?*, AM. LAW., Jan.-Feb. 1994, at 68.

[212] 51 F.3d 1293 (7th Cir.), *cert. denied*, 116 S. Ct. 184 (1995); *see supra* notes 54-63 and accompanying text.

[213] For an extensive discussion of the substantive and procedural history of *Rhone-Poulenc*, see Johnson, *supra* note 79, at 2339-46.

[214] *Rhone-Poulenc*, 51 F.3d at 1296.

[215] *Id.*

the mandatory class was certified, thirteen cases had been tried in various courts around the country, with defendants obtaining judgments in their favor in twelve of those.[216]

In this kind of situation, Judge Posner reasoned that a class action would be inappropriate because the massive potential exposure from an unfavorable verdict would create enormous pressure on the defendant to settle, regardless of the underlying merits of the individual cases.[217] Using the hypothetical numbers Judge Posner used to support this conclusion, we can see that plaintiffs' decision to seek class certification may have been coalitionally rational. Judge Posner reasoned that if the percentage of plaintiff's verdicts remained constant in later cases, then plaintiffs could expect only a 7.7% chance of prevailing in any individual case.[218] If, as Judge Posner speculated, the damages in a winning case would be $5 million, then plaintiffs' expected verdict in an individual case was $385,000. The expected value of pursuing individual litigation would actually be lower because the costs of litigating the individual case would have to be subtracted and the expected recovery would have to be reduced to present value.[219] In terms of the game theoretic model, the value of any singleton, or individual coalition, pursuing a stand-alone trial was relatively small.

Pursuing adjudication through a class action, however, would produce a greater expected value for two reasons. First, a mandatory class action might increase the number of plaintiffs from 400 to perhaps 5,000.[220] At $5 million per plaintiff, this suggests a potential recovery of $25 billion for the class. Multiplying that number by the 7.7% chance of winning gives the plaintiffs an expected recovery of $1.925 billion reduced by litigation costs and reduced to present value. Thus, merely by increasing the number of affected parties, plaintiffs were able to increase substantially the value of the case.

More importantly, by forming a large coalition, plaintiffs may have been able to gain significant bargaining leverage over defendants. Judge Posner reasoned that defendants faced with a potential $25 billion jury verdict and possible bankruptcy would not be willing to gamble that a jury would have

---

[216] *Id.*
[217] *Id.* at 1297-98.
[218] *Id.* at 1299-1300.
[219] *See* Posner, *supra* note 140, at 417-20; *see also supra* note 139.
[220] *Rhone-Poulenc*, 51 F.3d at 1298.

rendered a verdict in their favor, even if they had a 92.3% chance of prevailing.[221] There would be intense settlement pressure on defendants that would not otherwise exist if plaintiffs could not combine forces through collective action.[222] Essentially, this settlement pressure created value unavailable to plaintiffs that proceeded singly. It was thus coalitionally rational for plaintiffs to form a grand coalition because the value of that coalition was greater than the value that any plaintiff would expect to receive by going it alone or joining intermediate coalitions.[223] Each plaintiff would strictly prefer the grand coalition. In this case, the grand coalition had a solution in the core, explaining why plaintiffs sought mandatory certification.[224]

The validity of the core theoretic analysis of class actions in no way depends on the absence of agency costs. The core theoretic model recognizes that these costs are real and exist in many class actions. Indeed, the core theoretic model is sufficiently robust that it can easily be adapted to model the effect that agency costs will have on class action dynamics. Take for example the situation in which an attorney represents more than one type of claimant. In this situation, a de facto intermediate coalition is formed if the attorney is able to make strategic decisions with little or no monitoring from her clients. Significant agency costs may be imposed on the clients because

---

[221] *Id.*

[222] *Id.* Other courts have expressed similar concerns. *See* Coopers & Lybrand v. Livesay, 437 U.S. 463, 476 (1978); *In re* General Motors Corp. Pick-Up Truck Fuel Tank Prods. Liab. Litig., 55 F.3d 768, 784-85 (3d Cir.), *cert. denied*, 116 S. Ct. 88 (1995).

[223] *See* GARDNER, *supra* note 88, at 383; ORDESHOOK, *supra* note 89, at 340.

[224] The plaintiffs' desire for class certification in *Castano v. American Tobacco Co.*, 160 F.R.D. 544 (E.D. La. 1995), *rev'd*, 84 F.3d 734 (5th Cir. 1996), in which the district court certified a class action consisting of every addicted smoker in the United States, is susceptible to a similar analysis. In past individual litigation, plaintiff's attorneys had been singularly unsuccessful in recovering significant damages in product liability litigation against cigarette manufacturers. *See* Robert L. Rabin, *A Sociolegal History of the Tobacco Tort Litigation*, 44 STAN. L. REV. 853, 854 (1992). Under these conditions, the value of a singleton pursuing a lawsuit against a cigarette manufacturer, as with attorneys representing hemophiliacs infected with the AIDS virus, is quite likely low, and indeed may be less than the cost of the suit given the vigorous defenses that are typical in these cases.

Class status would have increased the stakes in the *Castano* because it would have resolved the rights of many more smokers than would have been likely to bring suit individually. Moreover, the defendants' downside was potentially much greater, thus giving the plaintiffs significant additional bargaining leverage and increasing the value of their cases. For these reasons, the value to each attorney in the consortium prosecuting the case was greater with a grand coalition of smokers than if each brought individual suits, or smaller class actions. *See* Milo Geyelin, *Lawyers Battling the Tobacco Industry Are Confronting Logistical Nightmare*, WALL ST. J., May 28, 1996, at A24 (noting that after the Fifth Circuit's decision decertifying the class action, the decision of the plaintiffs' consortium to pursue separate class actions in approximately 40 states was "likely [to] add years to the litigation and millions of dollars in costs"). As is discussed *infra* in Part V.B. not all mass tort class actions will follow this pattern.

the attorney, as the strategic decisionmaker, may seek to promote her best interests ahead of one or both groups of clients. Indeed, in game theoretic terms, if the attorney makes the decisions for both parties, then those parties should in reality be considered a single player.

This kind of agency cost problem may have existed in *Georgine v. Amchem Products, Inc.*[225] In that case, the Third Circuit reversed the district court's certification of a settlement class action negotiated between the Center for Claims Resolution (CCR), a consortium of former asbestos manufacturers,[226] and a class consisting solely of "future claimants," those who had been exposed to asbestos manufactured or sold by the CCR defendants but who had not yet brought suit.[227] In a settlement class action, the defendants and plaintiffs negotiate a settlement of a particular case either before the class is certified or sometimes before the action is brought.[228] A complaint, answer, and a proposed settlement agreement are then filed, and the court is asked to approve the settlement. Defendants agree that they will not oppose class certification if the settlement is approved as negotiated.[229]

On appeal, it was alleged that class counsel had a significant conflict of interest that prohibited approval of the settlement.[230] Class counsel in *Georgine* represented not only future claimants who were members of the proposed settlement class—they also represented a large number of present claimants.[231] While seeking conditional certification of the future-only class and approval of the proposed settlement, defendants also entered into a settle-

---

[225] 83 F.3d 610 (3d Cir.), *cert. granted sub nom.* Amchem Prods., Inc. v. Windsor, 117 S. Ct. 379 (1996).

[226] The CCR was formed to seek resolution of claims through mechanisms that did not involve lengthy and expensive litigation. *See* Coffee, *Class Wars*, *supra* note 4, at 1388.

[227] The settlement was facilitated by the recommendation of the Ad Hoc Committee on Asbestos Litigation report which concluded that the backlog of asbestos cases could only be resolved through "aggregate or class proceedings." JUDICIAL CONFERENCE OF THE UNITED STATES, REPORT OF THE JUDICIAL CONFERENCE AD HOC COMMITTEE ON ASBESTOS LITIGATION 19 (Mar. 1991). Responding to that recommendation, the Judicial Panel on Multidistrict Litigation transferred all pending asbestos personal injury cases to the Eastern District of Pennsylvania. *Georgine*, 83 F.3d at 619 (citing *In re* Asbestos Prods. Liab. Litig. (No. VI), 771 F. Supp. 415, 424 (J.P.M.L. 1991)). For a complete history of the legal proceedings and negotiations that led up to the *Georgine* settlement, see Coffee, *Class Wars*, *supra* note 4, at 1388-99.

[228] *See* Coffee, *Class Wars*, *supra* note 4, at 1378-82.

[229] *See* Cramton, *supra* note 12, at 823.

[230] *Georgine*, 83 F.3d at 622-23.

[231] *Id.*

ment with class counsel pursuant to which they agreed to settle their entire inventory of claims for approximately $215 million.[232]

The appellate court did not base its decision on the agency cost issue, and it refused to determine whether any conflict in fact existed.[233] If there were significant agency cost problems in this case, as a number of scholarly commentators have speculated,[234] then those costs are easily encompassed within the core theoretic model. In the core theoretic model the attorney is the relevant player, and her expected attorney's fee award under different strategy choices will be the relevant value used in determining which strategy to follow. In core theoretic terms, the separate settlements in *Georgine* for present and future claimants are best understood as one global settlement encompassing both groups. Indeed, if the attorney is making the strategic decisions for both groups, then the game is best understood as involving only one player, the attorney who represented both groups. As a matter of core theory, such actions are easier to settle globally because there is only one inequality that needs to be satisfied. The single player will simply take the action that provides it with the greatest recovery.[235]

Core theory thus strongly suggests that in situations where single attorneys represent heterogeneous groups of claimants who do not have the ability to monitor and prevent attorney opportunism, global resolutions may be significantly simpler to achieve. These resolutions may come at a substantial cost, however, because attorneys may attempt to increase their recoveries by settling the different clients' claims differently. Intraclass loyalty problems of this sort may also arise in situations where no agency costs are present. Dif-

---

[232] *Id.* at 622; *see* Coffee, *Class Wars*, *supra* note 4, at 1392.

[233] *Georgine*, 83 F.3d at 630.

[234] *See* Coffee, *Class Wars*, *supra* note 4, at 1393-99; Koniak, *supra* note 13, at 1051-57, 1078-86.

[235] The core theoretic model used here can be rather easily modified to analyze situations in which at least some of the class members have the ability to participate in the strategic decisionmaking. In such a case, those class members are simply made players. Consider a securities class action in which one class counsel represents the entire class, which consists of a mixed group of institutional investors and small claimants. Collective action problems create rational apathy problems for the small claimants, and the attorney effectively makes all strategic decisions for them. The institutional investors, however, may have an incentive to monitor the class attorney because they will tend to have larger claims than other members and because they may be able to achieve positive portfolio effects from deterring nonmeritorious litigation. *See* Grundfest & Perino, *supra* note 29, at 600-04; Elliott J. Weiss & John S. Beckerman, *Let the Money Do the Monitoring: How Institutional Investors Can Reduce Agency Costs in Securities Class Actions*, 104 YALE L.J. 2053 (1995). In this situation, the relevant players will be the class attorney and the institutions. Agency costs can also be modeled by making the faithless counsel and her client separate players. This increases the number of inequalities necessary for finding a core. *See* GARDNER, *supra* note 88, at 398.

ferent subclasses may be represented by separate attorneys and those attorneys may faithfully represent the interests of the subclass. In so doing, they may attempt to restrict the bargaining space of other players. As we saw in the previous Part, the presence of strong opt-out rights among a small group of claimants may create opportunities to create a core by requiring weak claimants to make sidepayments to strong ones.

The proposed global breast implant settlement may be an example of such a situation. One prominent commentator has noted that the settlement process in that case did not seem to be collusive, but rather provided "a commendable example of a mass tort litigation that was structured reasonably and supervised intensively by the federal court."[236] The initial negotiated settlement in that case, however, ceased to be viable after too many high-stakes present claimants opted out of it to pursue individual litigation.[237] Pursuant to a provision in the settlement agreement, the parties attempted to renegotiate the settlement to provide more money to the present claimants "perhaps by reducing the funds payable to future claimants."[238] Future claimants are likely to have significantly weaker exit options than high-stakes present claimants. Thus, the relative strength of the exit options in the breast implant case might provide a better explanation for any attempt to redistribute settlement shares than any agency costs.

B. Opt-Outs and the Class Action Paradox

Core theory highlights a paradox concerning opt-outs and the ability to maintain a stable coalition. As demonstrated in the previous Part, opt-out rights can act as powerful bargaining tools that can dramatically shift power within the class. But, as this Part explains, opt-out rights are least likely to function in this manner in the consumer and other large-stakes, small-claims class actions where claims for individual autonomy are weakest. Unfortunately, these are among the cases in which agency costs have often been a significant concern. In mass tort cases that typically have strong claims for individual autonomy, a significant number of claimants are likely to have a feasible opportunity to opt out, and opt-out rights are the most likely to disrupt

---

[236] Coffee, *Class Wars*, *supra* note 4, at 1404; *see also* Cramton, *supra* note 12, at 828 (noting that settlement negotiations in the breast implant litigation were "reasonably open, participatory and reliable").

[237] *See* Coffee, *Class Wars*, *supra* note 4, at 1408-10; *see also infra* notes 266-87 and accompanying text for a core theoretic analysis of the opt-outs from the breast implant settlement.

[238] Schuck, *supra* note 4, at 942-43 n.6.

class-wide resolutions. Thus, recognition of opt-out rights in cases in which they are feasibly employed can destroy the effectiveness of the class action mechanism.

Consider first the large-stakes, small-claims class action in which each individual claimant has a relatively small potential recovery. In these cases, transaction costs prevent any class member from pursuing an individual action because the fixed costs of litigation exceed the expected recovery.[239] As a result, the opportunity and transaction costs for an attorney to try an individual action, rather than settling through the class mechanism, are greater than the attorney's expected fee award.[240] Under these conditions, no attorney is likely to try the case.

In terms of core theory, the expected payoff for claimants from defecting from the grand coalition is likely to be zero. Although claimants have a theoretical right to opt out, they have no practical ability to do so. As a result, the first three inequalities that are necessary for establishing a core are satisfied.[241] Every potential defector will strictly prefer remaining in the class action because the payoffs from forming a singleton or intermediate coalition are lower than those available in the grand coalition.[242] Whether in such a case a core is present for a grand coalition consisting of all class members

---

[239] RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 569-70 (4th ed. 1992).

[240] Again, the analysis is similar to that made in choosing whether to settle or try a case. Judge Posner has described this latter analysis as follows:

> Suppose a defendant offers $100,000, the contingent fee is 30 percent regardless of when the litigation ends, and the lawyer is sure he can get a judgment for $120,000 if the case is tried but knows that it will cost him, in time and other expenses, $8,000 to try it. His client will be better off if the case is tried, for after paying the lawyer's fee he will put $84,000 in his pocket rather than $70,000 if it is settled. But the lawyer will be worse off, since his additional fee, $6,000 ($36,000-$30,000) will be less than the trial costs of $8,000 that he must incur.

Chesny v. Marek, 720 F.2d 474, 477 (7th Cir. 1983), *rev'd on other grounds*, 473 U.S. 1 (1985); *see also* Coffee, *Entrepreneurial Litigation*, *supra* note 4, at 887.

[241] These three inequalities are:

$$v(\{1\}) \leq u_1$$
$$v(\{2\}) \leq u_2$$
$$v(\{3\}) \leq u_3.$$

They are likely satisfied in this case because where an individual, independent suit is not viable, the value of $v(\{1\}) = v(\{2\}) = v(\{3\}) = 0$.

[242] *See* GARDNER, *supra* note 88, at 383; ORDESHOOK, *supra* note 89, at 340; Wiley, *supra* note 89, at 558.

will thus depend on whether intermediate coalitions have the ability to break off from the class to obtain some greater value.[243]

Core theory supports the observation that opt-out rights are not likely to destabilize class actions involving relatively small individual stakes or where the variance between the expected recovery in the class action and the individual action is low.[244] Indeed, this observation is consistent with anecdotal evidence of the low opt-out rate that generally prevails in large-scale, small-stakes class action litigation.[245] A low opt-out rate in these cases is consistent with core theory because the value of pursuing an individual action or an action through an intermediate coalition is likely to be less than the value of the expected recovery in the class action, especially in those cases where attorneys' fees and other transaction costs are likely to approach or exceed the expected recovery in the individual suits.[246] In game theoretic terms, the only solutions to these games are those that leave no individual in a position to improve its payoffs by defecting from the grand coalition to strike off on its own or to form an intermediate coalition.[247] Although real world applications are not likely to precisely mirror the theory, it is reasonable to expect that in tort or other class claims involving relatively little property damage or relatively small individual losses, there are likely to be few opt-outs.[248]

In re Cuisinart Food Processor Antitrust Litigation exemplifies such a large-scale, small-stakes consumer class action.[249] That case involved allegations of resale price maintenance that improperly raised the prices of certain small appliances. At most, such a scheme raised prices for consumer-plaintiffs

---

[243] *See* GARDNER, *supra* note 88, at 401; SHUBIK, GAME THEORY, *supra* note 89, at 147.

[244] *See* Macey & Miller, *supra* note 64, at 28 n. 86; Schwarzer, *Structuring Multiclaim Litigation*, *supra* note 67, at 1256.

[245] *See* Berland v. Mack, 48 F.R.D. 121, 129 (S.D.N.Y. 1969) (observing that "we would be naive not to recognize that where (as here) the maximum amount recoverable on behalf of each of thousands of stockholders would be quite small, those receiving notice would in all probability not have enough incentive to take any action"); Abraham L. Pomerantz & William E. Haudek, *Class Actions*, 2 REV. OF SEC. REG. 937, 940 (1969) ("As a practical matter, in class actions brought up to now, the percentage of persons seeking exclusion or to be represented by their own counsel has been extremely small. Most members of the class are usually content to let the aggressive plaintiff and his lawyer represent their interests, particularly in cases involving a large class where individual members do not have much of a stake.").

[246] *See* Macey & Miller, *supra* note 64, at 28.

[247] *See* GARDNER, *supra* note 88, at 383; ORDESHOOK, *supra* note 89, at 340.

[248] It is reasonable to expect defendants to oppose class certification because they may expect relatively few potential claimants to maintain individual suits if a class is not certified. Defendants will thus expect to pay significantly less in damages if a class is not certified. It is individually rational for defendants to oppose aggregative litigation in these cases.

[249] 38 Fed. R. Serv. 2d (Callaghan) 446 (D. Conn. 1983).

from $32 to $75 per unit.[250] Even with treble damages, no individual consumer or even subgroups of consumers would likely be able to pursue viable separate actions. As a result, even though the settlement approved by the court only provided coupons for 50% off the purchase price of another of the defendant's products, fewer than 1,000 of the 1.5 million class members objected to or opted out of the settlement.[251]

Some commentators suggest that the *Cuisinart* case is emblematic of the kinds of inadequate settlements that agency costs in class action litigation may generate.[252] If this conclusion is accurate, then this settlement may be consistent with the core theoretic result that under certain circumstances inadequate settlements may not prompt significant opt-outs.[253] In these cases, because independent suits are unlikely to be viable, it will be rational for claimants to remain in the class action because an inadequate payoff is still preferable to no payoff at all.

The difficulty, and the first half of a class action paradox that core theory highlights, is that although opt-outs are not likely to cause an unstable coalition in such a class action, permitting them is also unlikely to create many benefits for the class. Even if as a general matter opt-out rights can provide a check against inadequate or collusive settlements by allowing class members to "vote with their feet," rational apathy problems in these kinds of cases are unlikely to make that check an effective one.[254] It is precisely these cases, when the plaintiffs' small stakes create insufficient incentives to monitor class counsel, that present the greatest danger for opportunistic behavior.[255]

The other half of the class action paradox is that in cases in which opt-out rights are thought to be the most important, these rights are most likely to

---

[250] *Id.* at 449.

[251] *Id.* at 454. Specifically, 45 class members objected to the settlement, 89 requested to be excluded to avoid the res judicata effect of the settlement, and 825 opted out for other reasons (including 111 who did not wish to pursue any action against the company). *Id.*

[252] *See* Macey & Miller, *supra* note 64, at 45 n.131.

[253] *See supra* notes 173-86 and accompanying text.

[254] Macey & Miller, *supra* note 64, at 19-20; *see* Coffee, *Understanding the Plaintiff's Attorney*, *supra* note 64, at 679-80. Other problems, especially the significant problem of providing a meaningful notice to claimants that is understandable and clearly explains the legal options open to them, may contribute to the low opt-out rate in these cases. *See* Miller & Crump, *supra* note 24, at 16-23. In low-stakes class actions, however, the economic forces that reduce the incentive to opt out are likely to prevail, even if the notice perfectly informed class members of their options. Indeed, if the notice were perfect, claimants would realize that opt-out was not a viable option given the low expected recovery available to claimants.

[255] *See* Macey & Miller, *supra* note 64, at 19-20.

create an unstable class coalition. These include mass tort class actions involving personal injuries in which opt-out rights are thought to be necessary to protect litigative autonomy. Core theory suggests that inherently unstable class coalitions are more likely in cases where the payoffs from defecting are large enough to cover the costs associated with pursuing an individual action. It is not difficult to suggest situations in high-stakes mass tort cases in which players may expect to obtain a recovery in excess of what might otherwise be available in a class action. Certainly, if punitive damages may be recoverable, then a plaintiff obtaining an early judgment may be able to obtain a disproportionate share of those damages, as the courts advocating the punitive damages overkill theory have suggested.[256]

Compensatory damages can also vary significantly between class and individualized recovery for a variety of reasons,[257] some of which may be independent of the sufficiency of the proposed class recovery. Variance between jury awards may potentially be significant.[258] As a practical matter, different

---

[256] *See In re* Federal Skywalk Cases, 93 F.R.D. 415, 424-25 (W.D. Mo. 1982), *vacated*, 680 F.2d 1175 (8th Cir. 1982); *see also In re* Asbestos Prods. Liab. Litig., (No. VI), 771 F. Supp. 415, 418-20 (J.P.M.L. 1991) (noting that multiple awards of punitive damages to present claimants may deny recovery to future claimants).

[257] Studies of asbestos litigation have found that, all other factors being equal, claims that began trial received 2.28 times more compensation than similar claims settled before trial. JAMES S. KAKALIK ET AL., VARIATION IN ASBESTOS LITIGATION COMPENSATION AND EXPENSES 58-59 (1984). Moreover, compensation per claim tended to decrease as the number of plaintiffs in a lawsuit increased. *Id.* at 61-63; *see* McGovern, *supra* note 64, at 667. Professor McGovern has noted that in *Jenkins v. Raymark Indus.*, 782 F.2d 468 (5th Cir. 1986), an asbestos class action, 52 of 805 potential class members opted out, in part because their attorneys were "afraid that any lump-sum resolution would shortchange their clients." McGovern, *supra* note 64, at 667. As it turned out, these perceptions may not have been inaccurate. *Jenkins* was settled after 20 days of trial for a total of $137 million. *Id.* at 671. On average, the awards to plaintiffs in the class action cases were 25% lower than the mean of prior settlement values. *Id.* at 671.

[258] *See In re* School Asbestos Litig., 789 F.2d 996, 1000-01 (3d Cir. 1986); *In re* Joint E. & S. Dist. Asbestos Litig., 129 B.R. 107, 810 (E. & S.D.N.Y. 1991), *vacated on other grounds*, 982 F.2d 721 (2d Cir. 1992), *modified*, 993 F.2d 7 (2d Cir. 1993); DEBORAH H. HENSLER ET AL., ASBESTOS IN THE COURTS: THE CHALLENGE OF MASS TOXIC TORTS xix (1985).

The Rand Institute has also conducted a number of empirical studies concerning the factors that may account for variations in jury verdicts. *See* AUDREY CHIN & MARK A. PETERSON, DEEP POCKETS, EMPTY POCKETS: WHO WINS IN COOK COUNTY JURIES (1985); MICHAEL G. SHANLEY & MARK A. PETERSON, COMPARATIVE JUSTICE: CIVIL JURY VERDICTS IN SAN FRANCISCO AND COOK COUNTIES, 1959-1980 (1983). While these studies do not attempt to assess whether different verdicts were adequate or inadequate, they do suggest that the size of verdicts may vary depending on factors that may not be relevant to the merits. For example, one study reported a "modest deep pocket" effect with respect to plaintiffs that did not suffer severe injuries. CHIN & PETERSON, *supra*, at vi-vii, 41-49. This effect was found to be "far stronger when plaintiffs were severely injured." *Id.* Not only did corporations pay significantly more in those cases than in other types of cases, they were also more likely than other defendants to be found liable. *Id.* Although not conclusive, these findings suggest the possibility that differently situated plaintiffs might have incentives to

juries may arrive at significantly different damage calculations, in large part due to the vague standards for awarding nonpecuniary damages that typically apply in tort cases.[259] Anecdotal evidence suggests that juries in certain jurisdictions have reputations for awarding significantly higher amounts to tort plaintiffs than those in other jurisdictions.[260] The presence in certain jurisdictions of substantial awards in similar cases might cause attorneys to bring individual cases there or to seek individualized adjudication of claims pending there.[261]

Whether as an empirical matter the perception that certain jurisdictions tend to produce higher awards is correct,[262] the actual amount of settlements is likely to be affected by those perceptions. Settlements in jurisdictions with reputations for higher jury awards may tend to be higher on average and over time than in jurisdictions without such reputations. Indeed, the presence of large, well-publicized jury awards in similar cases may encourage opt-outs if the compensation through the class action mechanism is viewed as out of line with the earlier award. In other words, it may be irrelevant that an individual award was potentially excessive if it provides a benchmark against which all future claimants will measure proposed settlements.[263]

---

opt out of a class action because of the prospect of a jury award higher than the recovery they expect in the class action, regardless of whether the class action recovery is adequate.

Moreover, in the mass tort context, some anecdotal evidence suggests that juries may be willing to award damages even though a plaintiff may not have proven all of the elements of its claim. *See Frontline: Breast Implants on Trial* (PBS Television Broadcast, Feb. 27, 1996), available on the Internet at <http://www.pbs.org/wgbh/pages/Frontline/implants>.

[259] *See* MICHAEL D. GREEN, BENDECTIN AND BIRTH DEFECTS 160 (1996); Randal R. Bovbjerg et al., *Valuing Life and Limb in Tort: Scheduling "Pain and Suffering,"* 83 NW. U. L. REV. 908 (1989) (proposing alternative standards for valuation of noneconomic damages in tort cases).

[260] *See* McGovern, *supra* note 64, at 664; Laurie P. Cohen, *Southern Exposure: Lawyer Gets Investors to Sue GE, Prudential in Poor Border Town*, WALL ST. J., Nov. 30, 1994, at A1; Christian Harlan, *Third Nine-Figure Award Suggests that Big Is Big with Texas Juries*, WALL ST. J., July 27, 1992, at B8; Walter Olson, *Rule of Law: A Small Canadian Firm Meets the American Tort Monster*, WALL ST. J., Feb. 14, 1996, at A15 (noting reputations of Mississippi and Alabama for awarding large punitive damages against out-of-state corporations); Roger Parloff, *An American Plaintiffs' Paradise*, AM. LAW., May 1991, at 64; Gary Taylor, *Is It the Best Little Plaintiffs' City in Texas?*, NAT'L L.J., Dec. 8, 1986, at 8; *see also* Polaris Inv. Mgmt. Corp. v. Abascal, 890 S.W.2d 486, 487-89 (Tex. App. 1994) (Rickhoff, J., concurring); J. Stephen Barrick, Comment, *Moriel and the Exemplary Damages Act: Texas Tag-Team Overhauls Punitive Damages*, 32 HOUS. L. REV. 1059, 1060 (1995).

[261] Gary Taylor, *Breast Implant Suits Pouring in After $25 Million Verdict*, NAT'L L.J., Jan. 18, 1993, at 3.

[262] Some evidence suggests that this perception may not be correct. *See* SHANLEY & PETERSON, *supra* note 258, at ix-xi; KAKALIK ET AL., *supra* note 257, at x-xi.

[263] One benefit of global resolution, as Professor McGovern has persuasively argued, is that it allows for court-appointed experts to study the variables that drove outcomes in previous cases to arrive at a fair

Other factors may create additional incentives to opt out of class litigation regardless of whether the class mechanism provides the plaintiff with sufficient compensation. For example, an attorney's ethical obligation to zealously advocate his clients' best interests may cause him to opt his clients out of a class action if the attorney expects a higher recovery in an individual action.[264] The incentives for certain attorneys to opt their clients out of the class action may be enhanced by the split in the mass tort bar between the firms that concentrate on representing severely injured claimants with potentially high damage claims and "wholesalers" who tend to represent large groups of claimants for whom they seek settlements *en masse*.[265] Attorneys in the former group should have greater incentives to seek individual adjudication of their clients' claims, especially if those attorneys are highly skilled trial attorneys or negotiators who expect to be able to obtain greater recoveries for their clients than are available through aggregative methods.

Mass torts cases involving significant personal injuries are likely to exhibit many of these characteristics. Take for example the silicone gel breast implant class action and settlement. As Professor Coffee has noted, that settlement "provides an object lesson in the fragility of mass tort settlements—at least when present claimants are able to opt out."[266] The history of this litigation and the disintegration of the global settlement have been described in great detail elsewhere and will not be reiterated at great length here.[267] An examination of some of the basic facts, however, reveals a pattern of opt-outs that may be consistent with game theoretic concepts of core.

In September 1993, an approximately $4.23 billion global settlement was announced.[268] It was estimated at that time that class members would re-

---

value for resolving the remaining cases. *See* McGovern, *supra* note 64, at 692-93. Broad sampling has the benefit of reducing the effects of any outlier jury awards. When these findings are used to establish claim schedules that resolution facilities can use to process remaining claims, there is a greater probability that similar claims will be treated similarly, rather than being subjected to the vagaries of the jury system. *See id.* Of course, such consistency for the remaining cases is only possible if all cases are subject to the same procedures, i.e., if no claimants are allowed to opt out into the individualized tort system.

[264] *See* MODEL CODE OF PROFESSIONAL RESPONSIBILITY CANON 7 (1980); *see also id.* at EC 7-1 ("each member of society is entitled . . . to seek any lawful objective through legally permissible means; and to present for adjudication any lawful claim, issue, or defense.").

[265] *See* Coffee, *Class Wars*, *supra* note 4, at 1365; Coffee, *Entrepreneurial Litigation*, *supra* note 4, at 912-14.

[266] Coffee, *Class Wars*, *supra* note 4, at 1405.

[267] *See id.* at 1404-10; Hensler & Peterson, *supra* note 4, at 992-98; Joseph Nocera, *Fatal Litigation*, FORTUNE, Oct. 16, 1995, at 60; Joseph Nocera, *Fatal Litigation: Dow Corning Succumbs*, FORTUNE, Oct. 30, 1995, at 137.

[268] *See In re* Silicone Gel Breast Implant Prods. Liab. Litig., No. CV-92-P-10000-S, 1994 U.S. Dist.

ceive between $200,000 and $2 million under the settlement, depending on the type and severity of their injury.[269] In April 1994, the court provisionally certified a (b)(3) class action for settlement purposes and gave preliminary approval to the proposed settlement.[270] As with all Rule 23(b)(3) class actions, claimants had the right to opt out of the settlement and pursue individualized adjudication. The settlement, however, provided an additional opt-out opportunity. If higher than expected claim filings caused projected scheduled benefits to be reduced, then plaintiffs would again have the opportunity to opt out into the individualized tort system. The court approved the settlement in September 1994.[271]

The opt-out provisions were a recipe for disaster in core theoretic terms, and they foreshadowed the ultimate demise of the global settlement. Indeed, the fragility of the breast implant settlement was almost certainly due to both the larger than expected number of claimants seeking recovery from the settlement fund and the procedural mechanisms put in place within the settlement agreement that permitted escape from the collectivized procedure.

At the time the court gave final approval to the settlement, some 7800 domestic claimants and 6500 foreign claimants opted out of the litigation, or approximately five percent of the total number of identified, putative class members.[272] This number, although relatively small, was significantly higher than appears typical for small claims class actions. More important than the raw numbers, the character of the opt-out cases is consistent with the predictions the class action model generated. Under that model, it would be individually rational for class members to opt out of the global settlement if they expected a sufficiently high recovery outside the class action to cover opportunity and other costs associated with pursuing an individualized litigation.

Under the approved settlement, high-stakes claimants could expect a maximum recovery of $1.4 million, net of attorney's fees, without a showing of causation.[273] Although substantial, especially in light of the weak causal link

---

LEXIS 12521 (N.D. Ala. Sept. 1, 1994).

[269] Coffee, *Class Wars*, *supra* note 4, at 1407-08.

[270] *See Silicone Gel*, 1994 U.S. Dist. LEXIS 12521, at *1.

[271] *Id.* at *1-2.

[272] *Id.* at *17.

[273] *Id.* at *5. Claimants at the lower end of the damage schedule could expect to receive about $105,000. *Id.* These numbers represented substantial reductions from the amounts originally contemplated when the settlement was first proposed. *See supra* note 269 and accompanying text. As more claimants registered under the terms of the global settlement, these figures were further reduced. *See infra* note 284. Al-

between breast implants and the autoimmune diseases[274] that were the basis for the largest scheduled damage recoveries,[275] the settlements were still far below some of the jury verdicts that had been awarded in individual cases. For example, in December 1991, a California jury awarded $7.3 million to a plaintiff who alleged that her implants caused an autoimmune disorder.[276] In late 1992, a Texas state court jury arrived at a total verdict, including punitive damages, prejudgment interest, and attorney's fees, of $28 million.[277] Another Texas jury awarded three plaintiffs $27.9 million in March 1994.[278] A third Texas jury awarded $5.2 million to a woman and her husband in February 1995.[279] In November 1995, a Nevada plaintiff obtained a $14 million jury verdict.[280]

---

though the effect of these additional claimants was substantial, and itself was consistent with basic core theoretic concepts, it may not have affected the original opt-outs greatly. *See* Gina Kolata, *A Case of Justice, or a Total Travesty?*, N.Y. TIMES, Jun. 13, 1995, at D1 (noting that by October 1994, one month after the settlement had been approved, 145,000 women had registered for inclusion in the global settlement, far fewer than the over 400,000 who eventually registered).

[274] Epidemiological studies have found either a weak association between breast implants and the more serious conditions the implants allegedly caused, such as connective-tissue diseases, or no association at all. *See, e.g.*, S. Gabriel et al., *Risk of Connective-Tissue Diseases and Other Disorders After Breast Implantation*, 330 NEW ENG. J. MED. 1697 (1994); J. Goldman et al., *Breast Implants, Rheumatoid Arthritis, and Connective-Tissue Diseases in a Clinical Practice*, 48 J. CLINICAL EPIDEMIOLOGY 571 (1995); Charles H. Hennekens et al., *Self-Reported Breast Implants and Connective-Tissue Diseases in Female Health Professional: A Retrospective Cohort Study*, 275 JAMA 616 (1996); J. Sanchez-Guerrero et al., *Silicone Breast Implants and the Risk of Connective-Tissue Diseases and Symptoms*, 332 NEW ENG. J. MED. 1666 (1995); B. Strom et al., *Breast Silicone Implants and the Risk of Systemic Lupus Erythematosus*, 47 J. CLINICAL EPIDEMIOLOGY 1697 (1994); *see also* American College of Rheumatology, Statement on Silicone Breast Implants (Oct. 22, 1995); Marian Segal, *News About Breast Implants*, FDA Consumer, Nov. 1995, at 11, 12 (noting that: (1) studies do not "rule out the possibility that a subset of women with implants may have a small increased risk of these conditions, or that some women might develop other immune-related symptoms that don't conform to 'classic' disease descriptions," and (2) studies did not address other matters, such as rupture rates or incidence of capsular contracture, i.e., shrinking of scar tissue around the implant).

These studies have excluded any large risk of connective-tissue disease as a result of having breast implants. Although the latest and most extensive of the studies suggested a possible small increase in such diseases resulting from implant surgery, that finding may have been the result of bias due to differential overreporting of connective-tissue diseases or selective participation by women with breast implants. *See* Hennekens, et al., *supra*, at 616.

[275] *Silicone Gel*, 1994 U.S. Dist. LEXIS 12521, at *19-28.

[276] *See* Hensler & Peterson, *supra* note 4, at 994.

[277] *See id.* at 996.

[278] *See* Barnaby J. Feder, *3 Are Awarded $27.9 Million in Implant Trial*, N.Y. TIMES, Mar. 4, 1994, at A16.

[279] *See $5 Million for Implant Leak*, N.Y. TIMES, Feb. 16, 1995, at A20.

[280] *See Frontline: Breast Implants on Trial*, (PBS Television Broadcast, Feb. 27, 1996), available on the Internet at <http://www.pbs.org /wgbh/pages/Frontline/implants>.

Under these circumstances, core theory would predict that class members with claims a jury might find sympathetic or claims that arose in jurisdictions that had previously awarded significant damages would find it rational to opt out. These claimants might reasonably anticipate that they would be better off pursuing an individual action rather than accepting the comparatively small sums available through the negotiated settlement. In other words, in these cases the value of a singleton or an intermediate coalition would exceed the value of maintaining the grand coalition. In large part, this appears to be what happened with respect to the claimants who opted out as of the time the settlement was approved. A large percentage of the opt-out cases were pending in Texas, which had a reputation for large jury awards in tort cases generally and also had some of the highest jury awards in litigated breast implant cases.[281] Many of the opt-out claimants were represented by a well-known tort lawyer who had obtained some of the largest breast implant jury awards and who had a reputation for pursuing a disaggregative strategy in mass tort cases.[282] Although the fact that plaintiffs were not required to prove causation might have been a significant inducement to stay in the class in some cases, the large jury awards appeared to demonstrate that a weak causation case was not a significant impediment in individual litigation.

The additional opt-out right that came into play if too many claimants registered claims with the global settlement merely compounded these problems by giving more claimants a strategy for exiting the collective once it was no longer individually rational to remain in it. By spring 1995, some 435,000 claimants filed notices of eligibility, far in excess of what the parties had predicted.[283] The plethora of claims significantly reduced the potential recoveries that claimants could expect from the settlement.[284] In terms of core theory, this meant that the shrinking value of the recovery through the class coalition was making the value that could be obtained through single-

---

[281] *See* Frankel, *supra* note 211, at 80.

[282] *See id.*

[283] *See* Coffee, *Class Wars*, *supra* note 4, at 1408. The high claim rates, when viewed in light of the apparently weak causal link between breast implants and autoimmune diseases (the most serious injury the implants have allegedly caused), lends some credence to the intuition that adverse selection may cause many weak claimants to seek recovery in a mass tort class action than might otherwise file individual claims. *See supra* notes 73-77 and accompanying text. This is not to say that plaintiffs brought knowingly false claims. Rather, claimants may have attributed symptoms to breast implants that were in fact caused by something else.

[284] By the summer of 1995, so many claimants had registered that claimants could expect to receive at most $70,000 (down from the $1.4 million expected when the settlement was given final approval) or at least $5250 (down from $105,000). *See* Coffee, *Class Wars*, *supra* note 4, at 1408 n.259.

tons or intermediate coalitions more attractive. The effect of voluminous claims is much the same as in the class action model where the opt-out of one high-stakes class member causes a cascading effect that further destabilizes the coalition.[285] In either case, as the amount of the potential recovery from the class coalition decreases, it becomes rational for more and more class members to opt out. The large number of plaintiffs flocking to the settlement would likely have caused even more claimants to opt out had Dow Corning, the principal defendant, not filed a Chapter 11 bankruptcy petition.[286] This filing significantly reduced the value of opting out because the automatic stay in bankruptcy meant that claimants would not be able to obtain jury verdicts against Dow Corning.[287]

VI. THE LEGAL IMPLICATIONS OF CORE THEORETIC ANALYSIS

Core theoretic analysis gives rise to a number of important insights for understanding and structuring global class resolutions. Among the most important of these insights is that opt-out rights often do not serve their intended purpose, and that they may have to be curtailed in order for the aggregative mechanism to be practically effective. As a result, core theory strongly suggests that courts should not be reticent to curtail opt-out rights or impose mandatory classes under appropriate circumstances. Indeed, even using settlement classes as a mechanism for constraining bargaining options might be appropriate provided that those classes are subject to aggressive oversight by the judiciary to avoid collusive settlements.

The core theoretic model demonstrates the need to think with care about just what is being accomplished by maintaining a hybrid system that attempts to combine both individualization and collectivization. It is all too easy to view such a system as one that simply maintains the symbolic importance of litigative autonomy. Core theory gives a much more textured view of opt-out rights, and suggests that in certain circumstances these rights can impose real costs on some class members. Core theory strongly suggests that attempting to maintain individual autonomy in this fashion may be fundamentally incompatible with globally resolving many mass tort class actions in which some

---

[285] *See supra* notes 160-62 and accompanying text.

[286] *See* Coffee, *Class Wars*, *supra* note 4, at 1409-10. Attorneys for Dow Corning have cited the significant number of opt-outs as one reason for its bankruptcy filing. *See* Alison Frankel, *Dow Corning Goes for Broke*, AM. LAW., Jan.-Feb. 1996, at 80.

[287] *See* Coffee, *Class Wars*, *supra* note 4, at 1409.

claimants have the potential for significantly higher returns outside the class. Because these kinds of claimants are the only ones who have the practical ability to opt out, preserving that right may do little more than create a formal system of litigative autonomy that fails to provide true litigative autonomy to all claimants. Moreover, many of the efficiency benefits that might be realized through global litigation may be lost, and many smaller claimants may suffer harm if those who have the practical ability to opt out are able to obtain disproportionately large portions of the common pool of assets that are available to compensate all claimants.

Core theory also demonstrates that many of the instrumental benefits that opt-out rights theoretically provide may be illusory. For many kinds of claimants and in many kinds of class actions, opt-out rights are likely to have a negligible ability to provide a reliable market test for the adequacy of a proposed class action settlement. Core theoretic concepts provide a formal theory to support the empirical observation that few if any claimants will opt out of consumer class actions or other class actions involving large stakes but small claims.[288] In these cases, it will simply not be individually rational for any claimant to opt out because its recovery will be less than even a small and inadequate recovery in the class. In mass tort cases, core theoretic concepts of individual rationality suggest that opting out is only an option for claimants who expect to increase significantly their recoveries outside of the class. Due to the highly variable nature of tort awards, the group with the practical ability to opt out may not be representative of the class as a whole. For this reason, any evidence of inadequacy to be drawn from significant numbers of opt-outs may not be generalizable to the class as a whole. In other words, while a significant number of opt-outs may demonstrate that high-stakes claimants are not receiving amounts comparable to what they could obtain in individual tort cases, such evidence may or may not be relevant to assessing the overall fairness of a settlement.

Consequently, there appears to be little reason to maintain opt-out rights to battle collusive settlements when better protection may be afforded to such class members "by ensuring that they receive vigorous and faithful vicarious representation."[289] Large-stakes, small-claims classes, those involving future

---

[288] *See* Macey & Miller, *supra* note 64, at 28; Schwarzer, *Structuring Multiclaim Litigation*, *supra* note 67, at 1256.

[289] *See In re* "Agent Orange" Prods. Liab. Litig., 996 F.2d 1425, 1435 (2d Cir. 1993) (referring to the problem of providing adequate procedural protection for future claimants).

claimants, and settlement class actions, all require careful judicial monitoring to assure a fair, arm's-length bargaining process.[290] In these cases, it may make sense to experiment carefully with various reform proposals that seek to more closely align the interests of class counsel and class members, such as auctioning off the lead counsel position as some have suggested.[291] Even with such reforms, however, an important place remains for courts to scrutinize carefully the adequacy of class action settlements, as they have on occasion demonstrated they are capable of doing.[292]

Indeed, there may be much more efficient and reliable methods for assessing the fairness of compensation that do not rely on the opt-out. Courts have developed a number of sophisticated valuation techniques that may be just as effective as relying on deductions and guesses derived from opt-outs.[293] Regression analysis and statistical methods can be used to estimate the value of present and future claims. When all cases are collected in one proceeding, the court can carefully select representative cases for full trials or mini-trials[294] in order to facilitate settlement by providing the parties with sufficient valuation information. Sampling can be used to generate average awards for claimants with particular characteristics.[295] Moreover, although large claimants might not be perfect monitors that fairly represent the interests of all claimants in mass tort cases, these claimants may help to deter some of the

---

[290] *See id.* at 1437 (noting that "the quality and fidelity of counsel [is] of paramount importance in class actions . . . which involve unknown claimants").

[291] *See In re* Oracle Sec. Litig., 132 F.R.D. 538 (N.D. Cal. 1990); *In re* Oracle Sec. Litig., 131 F.R.D. 688 (N.D. Cal. 1990). Auctions, however, are not without their own difficulties. Auctioning class representation is a change in the traditional litigation model that may not be palatable as a political matter and may face significant opposition among attorneys who practice in the field. Even if this difficulty can be overcome, an auction process also creates practical and theoretical challenges. Auctions may require a significant amount of time to complete, which may further slow resolution of these matters. Professors Thomas and Hansen have also noted additional problems with an auction process. *See generally* Randall S. Thomas & Robert G. Hansen, *Auctioning Class Action and Derivative Lawsuits: A Critical Analysis*, 87 NW. U. L. REV. 423 (1993).

[292] *See* Georgine v. Amchem Prods., Inc., 83 F.3d 610 (3d Cir.), *cert. granted sub nom.* Amchem Prods., Inc. v. Windsor, 117 S. Ct. 379 (1996); *In re* General Motors Corp. Pick-up Truck Fuel Tank Prod. Liab. Litig., 55 F.3d 768 (3d. Cir.), *cert. denied*, 116 S. Ct. 88 (1995).

[293] *See* Robert G. Bone, *Statistical Adjudication: Rights, Justice, and Utility in a World of Process Scarcity*, 46 VAND. L. REV. 561 (1993); Rosenberg, *End Games*, *supra* note 13, at 709; Rosenberg, *Individual Justice*, *supra* note 12, at 570; Michael J. Saks and Peter D. Blanck, *Justice Improved: The Unrecognized Benefits of Aggregation and Sampling in the Trial of Mass Torts*, 44 STAN. L. REV. 815 (1992); Schuck, *supra* note 4, at 959-60.

[294] *See* Thomas D. Lambros, *The Summary Jury Trial: An Effective Aid to Settlement*, 77 JUDICATURE 6 (1993).

[295] *See* Saks & Blanck, *supra* note 293.

more egregious kinds of agency costs if they are required to remain in the class action.[296]

To be sure, these methods are not perfect. All of them reduce the potential for individual adjudication. But it is important to remember that the potential for such determinations is only limited for that subgroup of claimants which would have been able to pursue an individual action. With this cost comes at least the promise of awards that are more consistent among similarly situated claimants and without the danger that either side will have to bet its future on the outcome of a single jury trial.[297] What is more, these valuations can be obtained without destroying one of the prime benefits of class actions—providing a global resolution of controversies.

For these reasons, core theory at a minimum provides significant support for reforms that would permit courts to impose conditions on the right to opt out.[298] Such restrictions can be beneficial in attempting to maintain a core because they have the effect of decreasing the value of singletons and intermediate coalitions, thereby creating a greater possibility of finding a solution within the core for the grand coalition. Such restrictions have the additional benefit of maintaining the symbolism of litigative autonomy and an additional market-checking function, albeit an imprecise and imperfect one, that may provide some marginal deterrence against inadequate settlements. Problems remain because even with restrictions, there will still be a significant tension between the aggregative and individual systems. If one is intent on providing some meaningful opportunity to opt out, then one of the primary design difficulties will be crafting a restriction that is not so onerous that it takes away all incentive to opt out, while at the same time creating a sufficient disincentive to prevent large claimants from imposing externalities on those who must remain in the class. Crafting such a precise restriction is likely to be exceedingly difficult.

---

[296] *See supra* note 235. Indeed, this is the thrust of some of the reforms Congress recently enacted in the Private Securities Litigation Reform Act of 1995, Pub. L. No. 104-67, § 101(a), 109 Stat. 737 (codified in scattered sections of 15 U.S.C.A.).

[297] *See In re* Rhone-Poulenc Rorer, Inc., 51 F.3d 1293, 1298-99 (7th Cir.), *cert. denied*, 116 S. Ct. 184 (1995).

[298] *See* Coffee, *Entrepreneurial Litigation*, *supra* note 4, at 925-30; Mullenix, *Proposed Federal Procedure Act*, *supra* note 66, at 1066-67, 1072-73; Rosenberg, *End Games*, *supra* note 13, at 705-06, 714-15; Rubin, *supra* note 26, at 449.

Indeed, these difficulties suggest that courts should not be reticent to certify mandatory class actions in at least some cases. The core theoretic model demonstrates that limited fund cases where assets are insufficient to compensate all claimants fully present only a subset of the cases where mandatory class treatment may be appropriate. The difficulty in expanding mandatory classing to all constant sum cases is in determining which cases involve true constant sums. While class members' decisions to opt out of a class may not provide a reliable indicator of sufficiency, defendants' actions may be equally ambiguous. It is trivially easy for a defendant to assert the presence of a constant sum equal to the claims against it. Such an assertion may be true. A defendant may propose a mandatory class because it wants to obtain a global resolution of a controversy in order to avoid significant legal and other costs that may accrue if it must try numerous individual tort suits. It may believe that a proposed settlement provides appropriate compensation to all parties that may have been injured by its product.

But a defendant may equally seek mandatory classing when it has found a pliable plaintiff's attorney willing to exchange a significant fee award for an insufficient settlement. In a world of imperfect knowledge, courts may have great difficulty distinguishing these kinds of cases, particularly with respect to mass tort cases where enormous claims have been asserted and where there may be great difficulty in determining with any precision the aggregate exposure levels or the number of potential future claimants that might come forward. In the pretrial setting where these determinations will be made, the difficulties may be even greater. In such a world it is easy to see why a court might want to rely on opt-out rights to do the job for it. In certain truly indeterminate settings opt-out rights, while clearly imperfect, may provide a rough, although under the circumstances the best possible, market check against collusion or inadequacy.

Recognizing these practical realities, however, does not support the level of aversion that mandatory classing has often generated.[299] This resistance may be more adequately explained by the unwillingness of courts to foreclose plaintiffs from pursuing individual adjudications. Given this reluctance, a finding that a fund was clearly insufficient to satisfy all pending claims may have acted as a crude rule of thumb which enabled courts to identify readily those cases that were clearly appropriate for mandatory classing. For courts

---

[299] *See supra* notes 48-53 and accompanying text.

placing a premium on maintaining options for individual adjudication, requiring a strict showing for obtaining mandatory classing strikes an appropriate balance because the court can be reasonably certain that the possibility of individual adjudication will not be mistakenly foreclosed.

Core theory, however, suggests that this balance has been improperly struck. The model does not support those decisions that have placed extremely high hurdles for finding the existence of a limited fund. Requiring a lower court to find that earlier awards would "inescapably affect later awards,"[300] simply makes no sense. The difficulties in proving the existence of such a fund in a pretrial setting would likely mean that, as a practical matter, less than all constant sum cases are certified as mandatory class actions.[301] As a result, the benefits of mandatory classing would not be realized in even the narrowest subset of cases where the procedure is appropriate.

Of course, "numerous plaintiffs and a large *ad damnum* clause should [not] guarantee (b)(1)(B) certification."[302] The benefits of mandatory classing accrue in a broader range of cases than those in which earlier awards will inescapably affect later ones; therefore, the rule should be more inclusive. A more appropriate standard is "substantial probability,"[303] under which the court may certify a mandatory class action where "there is a substantial probability—that is less than a preponderance but more than a mere possibility—that if damages are awarded, the claims of earlier litigants would exhaust the defendants' assets."[304] This standard encompasses both kinds of cases where mandatory classing might be appropriate: those where a fund is clearly insufficient and those where there is a constant sum, but claimants have other avenues open to obtain a disproportionate share of the fund.

Core theory also suggests that settlement class actions may be appropriate in certain circumstances. Such classes are useful because they constrain the opportunity to opt out into the individualized tort system and thereby facilitate the finding of a core. In this way, settlement classes have the potential for achieving many of the efficiency benefits that class actions have promised. But such classes should only be used when the dangers of potential

---

[300] *Dalkon Shield*, 693 F.2d 847, 853 (9th Cir. 1982).

[301] *See In re* "Agent Orange" Prod. Liab. Litig., 100 F.R.D. 718, 726 (E.D.N.Y. 1983), *mandamus denied sub nom. In re* Diamond Shamrock Chems. Co., 725 F.2d 858 (2d Cir. 1984), *and aff'd*, 818 F.2d 145 (2d Cir. 1987); Payton v. Abbott Labs., 83 F.R.D. 382, 389 (D. Mass. 1979).

[302] *Payton*, 83 F.R.D. at 389.

[303] *In re "Agent Orange,"* 100 F.R.D. at 726-27.

[304] *Id.*

collusive settlements can be minimized.[305] As suggested previously, these cases require careful judicial monitoring. As much as possible, courts should ensure that different types of claimants have separate representation, and should prohibit the kinds of side settlements that occurred in *Georgine*.[306] These prohibitions will make it more difficult for attorneys to form cores by impermissibly favoring the recovery of one type of claimant over another. Finally, back-end opt-out rights, if properly structured, can also provide significant protection against potentially inadequate settlements without impeding excessively the ability to achieve a core.

There may be other reasons to have an opt-out rule that effectively gives certain claimants strong exit options. Excessive bargaining costs can result when, as may often be the case in class actions, the court that must approve the settlement under Rule 23(e) has incomplete information about the parties' positions and their relative entitlement to a given share of the fund. These conditions may give rise to significant bargaining costs as each party negotiates to obtain a recovery at the high end of the range that it believes the court is likely to approve. If the players' subjective views of the case give them significantly different ranges, then either the bargaining may be protracted or a negotiated solution may be impossible.[307] Providing exit options that set the range of bargaining may prevent breakdowns of this sort to the extent that all parties have sufficient information concerning the value of those options.[308]

Moreover, opt-out rights may be important if mass tort class actions in fact attract significant numbers of nonmeritorious claims,[309] and if the presence of those claims creates a claims-averaging effect that disproportionately disadvantages high-stakes claimants. Opt-out rights may serve to counteract these effects. This conclusion is not without difficulties, however. As a preliminary

---

[305] *See* Georgine v. Amchem Prods., Inc., 83 F.3d 610, 631 (3d Cir.), *cert. granted sub nom.* Amchem Prods., Inc. v. Windsor, 117 S. Ct. 379 (1996); *In re* Joint E. & S. Dist. Asbestos Litig., 982 F.2d 721, 743 (2d Cir. 1993), *modified*, 993 F.2d 7 (2d Cir. 1993).

[306] *See supra* notes 225-35 and accompanying text.

[307] *See* Posner, *supra* note 140, at 417-20; Priest & Klein, *supra* note 140, at 4-5 n.16; *see also* McGovern, *supra* note 64, at 679 (explaining that in the *Dalkon Shield* bankruptcy proceeding, "[a] multi-billion-dollar difference between management's estimates and the plaintiff's alleged total value of the Dalkon Shield claims, coupled with over a one billion dollar difference in estimates of the total value of the company, prevented negotiations from progressing past the preliminary stages").

[308] Baird & Picker, *supra* note 132, at 347.

[309] There is some evidence to support the idea that classes attract such claimants, or at least that they attract claimants that may not have filed a claim but for the existence of the class. *See* Schuck, *supra* note 4, at 960 n.93; Georgene Vairo, *Reinventing Civil Procedure: Will the New Procedural Regime Help Resolve Mass Torts?*, 59 BROOK. L. REV. 1065 (1993).

matter, allowing opt-out rights in every case does not distinguish between those cases in which class members opt out because they are in fact suffering from adverse selection effects and those cases in which class members are merely attempting to obtain a disproportionately large portion of a common pool. Moreover, opt-outs may permit high-stakes claimants the opportunity to avoid these adverse selection costs, but probably only by imposing significant costs on small claimants. If the class action involves a constant sum, any benefit that large claimants reap is likely to be borne by small claimants because opt-out rights fall short of creating a fully revealing separating equilibrium, i.e., one in which all of the different types of players choose different strategies.[310] Instead, opt-out rights create a partially separating equilibrium in which one type of claimant chooses the opt-out strategy and multiple types remain in the class. The partially separating equilibrium only distinguishes between those with claims that are economically viable as independent suits and those without such claims. Self-selection still leaves two types of claimants in the class. For those claimants that do not opt out, there will be no way of telling without additional procedures (such as those in a claims resolution facility) whether the claimant has a small claim that is valid but not economically viable as a stand-alone lawsuit or one that does not warrant any recovery at all.

In other words, both the small claimants that class actions were designed to protect and the nonmeritorious claims that seek to free ride off the class action will tend not to opt out. Moreover, the separating equilibrium opt-out rights create may further harm small claimants to the extent that opt-outs by large claimants destroy the benefit of a class action settlement for the defendant. In cases where the number of claimants opting out is significant, defendants may choose not to settle with smaller claimants at all, either because of the belief that the class consists of numerous nonmeritorious claims or because the defendant believes that the small claimants will not be able to mount economically viable suits against it. In these case, the costs associated with adverse selection (both in regard to the claims-averaging effect and those associated with claims resolution facilities) may be borne by small claimants while large claimants exercise their opt-out rights.

---

[310] *See* RASMUSEN, *supra* note 129, at 160.

VII. CONCLUSION

Core theory supports many of the observations made about the effects of granting opt-outs in class actions. It provides a formal framework for the intuitive observation that class attorneys, or class members who exercise strategic decisionmaking authority, will avail themselves of potentially more valuable opportunities if they have a practical ability to do so. Although this analysis does not address directly the difficult question of whether class actions or some other aggregative technique provides the best mechanism for resolving mass torts cases,[311] it does demonstrate that any attempt to process collectively mass torts through class actions, while still providing the promise of individualization through opt-outs faces significant challenges.

Ultimately, the decision concerning whether or to what extent to constrain opt-out rights is a normative one. The decision must be based on a determination as to how much individualism we want in our mass tort dispute resolution, and how much we are willing to sacrifice the efficiency and equity that may come with the class action procedure to maintain that individualism. Although core theory cannot answer that ultimate normative question, it is an exceedingly useful tool for understanding the likely consequences resulting from different dispute resolution designs. In this regard, core theory demonstrates that opt-out rights can function in important, yet unintended ways. At the same time, opt-out rights may fail to perform their expected functions, thereby undercutting the rationales asserted for maintaining them. It is only with an appreciation for the true costs and benefits of maintaining opt-out rights within the class mechanism that we can understand how to best structure those rights.

---

[311] For example, Professor Coffee has suggested that if obtaining a global resolution of claims is an important goal, then that objective is better accomplished through bankruptcy rather than through mandatory classing because of the greater procedural protections claimants are provided. *See* Coffee, *Class Wars*, *supra* note 4, at 1457-61; *see also* Resnik, *supra* note 4, at 930 (questioning whether one form of aggregative resolution will predominate over others).