

THE EFFECT OF JOINT AND SEVERAL
LIABILITY ON THE SETTLEMENT RATE—
MATHEMATICAL SYMMETRIES AND
METAISSUES ABOUT RATIONAL
LITIGANT BEHAVIOR: COMMENT ON
KORNHAUSER AND REVESZ

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LEWIS Kornhauser and Richard Revesz have given us an insightful and thought-provoking series of papers analyzing the effects of joint and several liability. They have discussed how joint and several liability influences the behavior of those engaged in activities that involve risk of harm and have unraveled the efficiency implications of joint and several liability under the substantive standards of negligence and strict liability. In their latest series of papers,¹ they extend their analysis of joint and several liability by examining the effect of this doctrine on the inclination of parties to settle litigation. They demonstrate convincingly that the existence of joint and several liability can have a profound effect on how rational and highly informed parties would decide whether to settle a case involving multiple defendants and that this is true both when the defendants are fully solvent and when one or more vary in their ability to satisfy judgments.

Section I of this paper begins with a simple illustration of a central finding from the work of Kornhauser and Revesz—that in the case of

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¹ Lewis A. Kornhauser & Richard L. Revesz, *Multidefendant Settlements: The Impact of Joint and Several Liability*, 23 J. Legal Stud. 41 (1994); Lewis A. Kornhauser & Richard L. Revesz, *Multidefendant Settlements under Joint and Several Liability: The Problem of Insolvency*, 23 J. Legal Stud. 517 (1994).

multiple tortfeasors, settlement will be encouraged by joint and several liability if the trial outcomes against the defendants are correlated and discouraged if these outcomes are independent. I then show through a simple graphical analysis that, in terms of the effect on the likelihood of settlement and plaintiff's recovery from litigation, the degree of independence is mathematically isomorphic to that of the degree of solvency on the part of one or more of the defendants. In other words, there is a continuum between perfectly correlated trial outcomes to perfectly independent trial outcomes just as there is a continuum from complete insolvency on the part of a defendant to total solvency. The graphical analysis in Section I illustrates the symmetry between these two continua by showing that both the size of plaintiff's expected recovery from litigation and the inhibitory effect on settlement decrease identically as either the dependence in trial outcomes or the degree of insolvency of a defendant increases.

Section II begins with an evaluation of some of the metaissues raised by the economic analysis of litigant behavior, especially in the wake of conflicting predictions by outstanding scholars, by raising the following question: if a complex economic theory suggests that the common intuition about the effect of, say, joint and several liability on the likelihood of settlement is incorrect, is the common intuition or the complex theory a better predictor of how litigants behave? One may wish to consider the degree of sophistication and foresight that should be attributed to parties embroiled in complicated litigative conflicts. This point is underscored by showing that even the Kornhauser and Revesz prediction of diminished likelihood of settlement when trial outcomes are independent can be undermined if plaintiffs can make contingent trial offers to defendants. Thus, economic models can fail to predict litigant behavior either because the litigants are not sufficiently sophisticated to anticipate and respond to complex situations or because they are so clever that they can circumvent economic predictions through creative contracting. Finally, I discuss how one might think about empirically testing the effect of joint and several liability on settlement and show how the theoretical work of Kornhauser and Revesz will be an invaluable aid to empirical analysts in this area because of the significant selection effects that would influence which cases involving multiple tortfeasors would go to trial under a regime of joint and several liability.

I. EXPLORING THE EFFECTS OF JOINT AND SEVERAL LIABILITY

Let me begin with the simplest of cases. A plaintiff has incurred an injury of \$1,000 and intends to sue a defendant for the damage. If there are no transaction costs, and if both parties are risk-neutral and believe

that the probability of success for the plaintiff is 50 percent, then the standard economic analysis of the litigation decision suggests that the case will settle for \$500. From this simple foundation, much work in the law and economics literature has been constructed.² Regrettably, there has been little empirical confirmation that litigants actually behave in this way, although virtually all economists proceed on the assumption—derived from the work of Von Neumann and Morgenstern—that rational actors would do so.

A. *A Litigation Model with Solvent Defendants*

I will now introduce a second defendant into the previous example in order to illustrate some of the central issues in Kornhauser and Revesz's paper. The plaintiff is assumed to have an action against defendants d_1 and d_2 for an injury of \$1,000 where there is joint and several liability. The probability of winning is perceived to be .5. Consider the following two cases.

1. Case 1: Trial Outcomes against the Defendants Are Perfectly Correlated

Over a decade ago, Easterbrook, Landes, and Posner analyzed this case as follows:³ each defendant assumes that, if the case goes to trial against him, he faces an expected loss of \$500. Thus, both defendants might initially expect to pay in settlement half this amount, or \$250. But once one defendant settles on these terms, the other defendant will find that the expected burden of litigation has changed because of the critical effect of the setoff rule. Since the plaintiff's recovery is limited to \$1,000, the amount that the nonsettling defendant can lose at trial is now \$1,000 less the \$250 that the plaintiff has received from the settling defendant. Thus, the expected loss for the nonsettling defendant is $.5(1,000 - 250) = \$375$. In other words, the settling defendant got away with paying \$250, while the other defendant has an expected litigation cost of \$375. The nonsettling defendant is therefore at a disadvantage, which indicates that more can be garnered from the settling defendant (since he will be willing to pay to avoid the higher burden of being the nonsettling defendant). Easterbrook, Landes, and Posner tell us that, in equilibrium, each

² Although many models now emphasize the strategic elements that operate in the context of litigation. See the survey by Robert Cooter & Daniel Rubinfeld, *Economic Analysis of Legal Disputes and Their Resolution*, 27 J. Econ. Lit. 1067 (1989).

³ Frank H. Easterbrook, William M. Landes, & Richard A. Posner, *Contribution among Antitrust Defendants: A Legal and Economic Analysis*, 23 J. Law & Econ. 331, 358 (1980).

party will settle for \$333.33, and the plaintiff will collect a total of \$667. Accordingly, they conclude that the rule of joint and several liability *promotes* settlement because defendants rush to settle to avoid being whipsawed by the plaintiff.

But Kornhauser and Revesz show that Easterbrook, Landes, and Posner have reached this prediction by unintentionally focusing only on a special case. The underlying but unstated assumption in the analysis of Easterbrook, Landes, and Posner is that regardless of which defendant is pursued, the same outcome will be achieved at trial. More formally, they assume that if litigation is pursued against both defendants, the trial outcomes are perfectly dependent events: A victory against d_1 always predicts a victory against d_2 , and so too for losses. Thus, with fully solvent defendants, a plaintiff need only sue one defendant: A victory over the first defendant will end the case because the judgment will be fully satisfied; a loss would be fully predictive of the outcome from suing the second defendant, thereby eliminating the need to litigate further. While this assumption might frequently be sound in the antitrust context that Easterbrook, Landes, and Posner were exploring,⁴ it certainly would not be expected to apply across all cases. To illustrate the significance of this issue, Kornhauser and Revesz examine the polar case in which the trial outcomes against each defendant are perfectly independent.

2. Case 2: Trial Outcomes against the Defendants Are Perfectly Independent

What can the plaintiff anticipate from litigation under this assumption? Under this scenario, suing both parties can be wise: If you lose against the first defendant, the plaintiff can still try to secure \$1,000 from the second defendant. In fact, given the independent probability of victory of .5 against each defendant, the plaintiff will successfully collect the full \$1,000 as long as she wins at least one of the lawsuits (which occurs three out of four times); otherwise, she will get zero. This implies that the expected value of the two suits is \$750 (given our assumption of zero transaction costs). Litigation in Case 1 had an expected value of only

⁴ If one thought of the typical case in which multiple defendants were charged with a violation of the antitrust laws as involving a price-fixing conspiracy, the assumption of perfect dependence in the trial outcomes against each defendant may frequently be reasonable. For example, if a plaintiff claimed that two defendants conspired to maintain high prices, a victory (or loss) against one logically compels a victory (loss) against the other. Of course, with larger conspiracies, the evidence against certain defendants might be weaker, and some defendants might be found to be unlawful coconspirators, while others were absolved of liability.

\$500, while in Case 2, the expected value rises to \$750. Accordingly, one would expect that Case 2 plaintiffs will demand more in settlement.

Assume that the plaintiff demands that d_1 satisfy half of the expected \$750 award, and d_1 agrees to pay \$375. This means that in a lawsuit against d_2 , the plaintiff would expect .5 times $(1,000 - 375) = \$312.5$. If litigating against both defendants would generate an expected benefit of \$750, but the settlement with d_1 and the trial against d_2 only generates \$687.5 ($= \$375 + \312.5), then the plaintiff would certainly not want to settle with d_1 on these terms. In fact, the plaintiff would only be happy collecting \$375 in settlement from d_1 if she could simultaneously get the same deal from d_2 . But d_2 will not accept such an offer if he knows that d_1 has already accepted, since the expected burden of going to trial would be less than \$375.

What if the plaintiff settles with d_1 for \$500? In this situation, the plaintiff can sue d_2 for only \$1,000 minus the setoff amount of \$500 paid by d_1 . Thus, the expected value of the claim against d_2 is \$250. Unlike in the Easterbrook, Landes, and Posner scenario, where the first defendant to settle weakened the position of the other defendant, the opposite occurs when the trial outcomes are independent. By settling, d_1 has conferred a benefit on d_2 . But this implies that both defendants will want to be the nonsettling defendant and will therefore hold back from striking a deal with the plaintiff. Contrary to the emphatic predictions of Easterbrook, Landes, and Posner, Kornhauser and Revesz contend that joint and several liability will *discourage* settlement—if the trial outcomes against the defendants are independent.

The preceding discussion is summarized in Table 1. Consequently, with perfectly correlated trial outcomes for the two defendants (col. 1), settlement is attractive to the plaintiff since it elevates her return (that is, row 2 > row 1), but when the trial outcomes against the two defendants are independent (col. 2), settlement is unattractive because the expected award of proceeding with litigation will be higher than that from pursuing settlement (that is, row 2 < row 1).⁵

B. A Graphical Differentiation of These Two Cases

Figure 1 depicts the previously discussed cases where the outcomes against the two defendants are perfectly correlated (Case 1) and where they are perfectly independent (Case 2). Each graph has a line that represents d_2 's expected loss at trial for any given amount that d_1 has already

⁵ See the caveat to this proposition involving the possibility of contingent settlement offers by the plaintiff in Section IIB *infra*.

TABLE 1
PLAINTIFF'S EXPECTED RECOVERY IN VARIOUS CASES

	Trial Outcomes against the Defendants Are:	
	Perfectly Dependent (1)	Independent (2)
Plaintiff's expected recovery:		
1) Via trial against both defendants	\$500	\$750
2) If d_1 settles for one-half the amount in row 1 and litigates against d_2	$\$250 + 375 = \625	$\$375 + 312.5 = \687.5

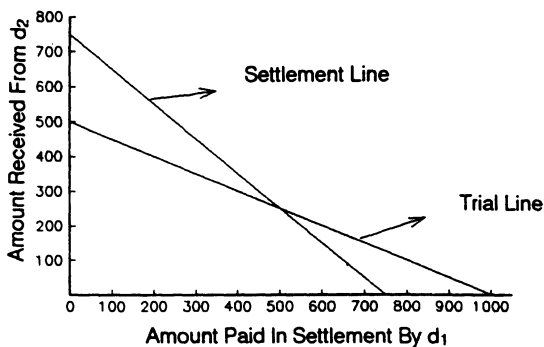
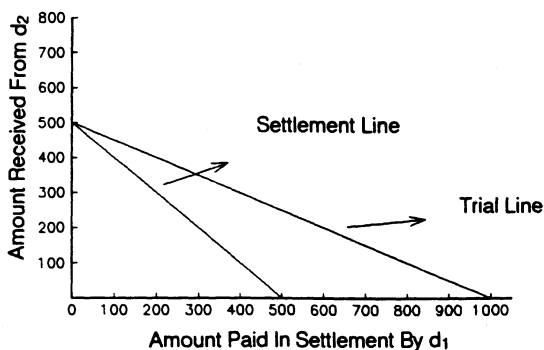


FIGURE 1.—Amounts received from d_2 (at trial or in settlement) for any settlement paid by d_1 . *a*, Case 1: perfectly correlated trial outcomes. Expected recovery against both defendants = \$500. *b*, Case 2: perfectly independent trial outcomes. Expected recovery against both defendants = \$750.

paid in settlement (call this the “trial line”). Note that the trial lines are identical in both cases because the setoff rule operates in the same manner when the plaintiff settles with one defendant and sues the other with a .5 probability of success. Thus, we see, for example, that if the plaintiff garners \$300 in settlement from d_1 , her expected gain from proceeding to trial with d_2 will be $.5(1,000 - 300) = \$350$ regardless of whether the trial outcomes for the two defendants would be perfectly correlated or not.

The two cases do differ, however, in the other line that appears in each graph (call this the “settlement line”). For any given settlement with d_1 (indicated along the horizontal axis), this line reveals how much the plaintiff would have to secure in settlement from d_2 to be as well off as she would have been from litigating against both defendants. As we saw in Table 1, however, litigating against both defendants will generate an expected award of \$500 in Case 1 and \$750 in Case 2. For Case 1, in which the trial outcomes are perfectly correlated, the plaintiff would have to receive \$300 from d_2 if she has already received a \$200 settlement from d_1 ; in this event, her total recovery of \$500 would equal her expected recovery from litigating with both defendants. For Case 2, in which the trial outcomes are independent, the plaintiff would have to receive \$550 in settlement from d_2 if she had already received a \$200 settlement from d_1 —anything less and the plaintiff would prefer to secure the expected award of \$750 from litigating against both defendants.

In order to determine whether settlement with d_2 is feasible, we can examine the relationship of the trial line and the settlement line. If the trial line is above the settlement line (for any given settlement paid by d_1), then settlement is encouraged because any settlement paid by d_2 that lies between these two lines will leave the plaintiff in a better position than she would have been through litigation with both parties and will leave d_2 better off than if he had refused to settle and gone to trial. Since in Case 1, the trial line is never below the settlement line, we know that settlement is encouraged when the trial outcomes are perfectly correlated. Conversely, in Case 2, where the settlement line is above the trial line (at least for the levels for which d_1 would be likely to settle),⁶ settlement is discouraged. Defendant d_2 would rather go to trial than pay an amount that would leave the plaintiff with \$750—the plaintiff’s expected recovery from litigating against both defendants. In other words, independence in the outcomes against the two defendants diminishes the likelihood of settlement.

⁶ The trial and settlement lines intersect at the point at which d_1 pays \$500 in settlement. Certainly, d_1 would have no incentive to agree to a settlement in excess of this amount.

C. *Exploring the Effects of One Defendant's Insolvency*

The preceding analysis has focused only on the situation in which both defendants are fully solvent and therefore can individually satisfy any judgment. The analysis of the effect of joint and several liability on litigation decisions becomes more complex when one or more of the defendants is financially insolvent, and Kornhauser and Revesz sensibly extend their work to consider this important issue.

To illustrate the implications of insolvency, let us continue with the same hypothetical that we have discussed above, but introduce the single change that d_1 has no assets. In this Case 3, there is no point in suing or trying to settle with d_1 —as the saying goes, you can't get blood from a stone. But note the similarity between this scenario and Case 1, where the outcomes in suits against the two solvent defendants were perfectly correlated. In both cases, the expected award to the plaintiff from pursuing litigation is exactly \$500, and only one defendant need be sued. In Case 1, the plaintiff would have a 50 percent chance of getting judgments for \$1,000 against solvent defendants and a 50 percent chance of failing against both defendants. In Case 3, the expected judgment against d_2 is simply $\$500 = .5 * \$1,000$. Indeed, one can analyze Case 3, where one defendant is judgment proof, by examining Case 1 in Figure 1 under the assumption that the settlement with d_1 is for \$0.⁷ The point is that both factors—perfect correlation in the trial outcomes against the defendants and insolvency on the part of one defendant—will encourage settlement in much the same way.

In fact, exploring intermediate cases of some dependence in the trial outcomes or limited solvency on the part of one of the defendants reveals a useful finding: the case of total insolvency is mathematically isomorphic to the case of perfectly symmetrical trial outcomes with respect to plaintiff's expected award from litigation and in terms of their effect on the likelihood of settlement. Recall that in our discussion of Figure 1 we had underscored that the trial line (indicating d_2 's expected loss at trial for any given settlement with d_1) was identical in both cases but that the settlement line shifted depending on the assumption about whether trial outcomes against the defendants were correlated or independent. Figure 1 illustrated the polar cases of perfect correlation (Case 1) and perfect independence (Case 2), but for an intermediate case—say, a .5 correlation in the trial outcomes—there would be a corresponding settlement

⁷ Although if the plaintiff were to pursue her claims to final judgment in both Cases 1 and 3, the expected award would be \$500, the expected recovery through settlement in Case 1 should be greater as some positive settlement can still be exacted from d_1 , which is not true in Case 3.

line halfway between and parallel to the settlement lines depicted for Cases 1 and 2. This case is illustrated in Figure 2. Since a lower settlement line encourages settlement, this intermediate case would have a lower likelihood of settlement than Case 1 but a higher likelihood than Case 2.

But because of the isomorphism between the issues of insolvency and dependence among trial outcomes, we can now see that Figure 1 can also be thought of as depicting the polar case of the insolvency of d_1 (Case 1) and the polar case of full solvency of d_1 with independent trial outcomes (Case 2). An intermediate case—say, where d_1 had only \$500 in assets that could be conveyed to the plaintiff—would generate the situation depicted in Figure 2: a settlement line that was exactly halfway between and parallel to the settlement lines depicted for Cases 1 and 2 in Figure 1. That is, we have the same situation when there is full solvency and a .5 correlation in the trial outcomes as when there is complete independence in the outcomes and one defendant is able to satisfy only half the total damages.⁸ Once again, the intermediate settlement line would constitute a movement away from the situation of full solvency (where settlement was impossible) toward the situation of total insolvency (where the impediment to settlement was eliminated).

To see this, note that, when d_1 has only \$500 in assets, the expected award to the plaintiff from litigating against both defendants (with independent trial outcomes) will fall from \$750 (Case 1) to \$625. There is now a 50 percent chance that the plaintiff will secure a full judgment of \$1,000 from d_2 , a 25 percent chance that no judgment will be returned, and a 25 percent chance that the plaintiff will be able to collect only \$500 from d_1 : $.5(1,000) + .25(0) + .25(500) = \625 . If the plaintiff were to secure a \$250 settlement from d_1 , d_2 would face an expected loss of \$375 ($= .5*(1,000 - 250)$). If d_2 then settled for this amount, the plaintiff would do as well as she would from litigating against both defendants. Unlike the case of full solvency (Case 1) where settlement was impossible, d_1 's limited solvency encourages settlement in exactly the same way that the partial correlation of trial outcomes encouraged settlement.

In summary, the settlement line shifts back and forth between the two cases of Figure 1 depending on the degree of correlation in the trial outcomes against the defendants or the level of insolvency of the defendants. The greater the degree of correlation and the lower the solvency, the lower is plaintiff's expected recovery and the greater is the likelihood that the case will settle.

⁸ Figure 2 describes both of these cases, but in the case of the limited solvency of d_1 , it should be remembered that d_1 can pay no more than \$500 in settlement. Therefore, points to the right of \$500 on the horizontal axis are not attainable in the case of d_1 's limited solvency but are feasible for fully solvent defendants.

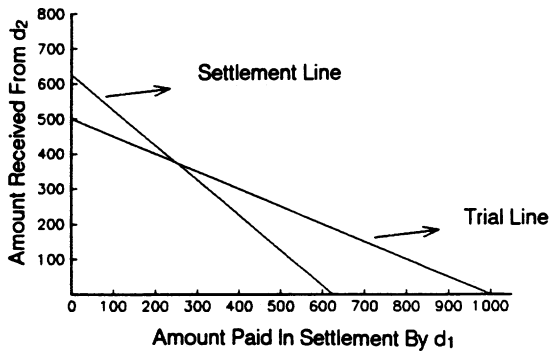


FIGURE 2.—Amounts received from d_2 (at trial or in settlement) for any settlement paid by d_1 . The cases of partial correlation in trial outcomes and of partial solvency by d_1 . Expected recovery from litigating against both defendants = \$625.

II. PREDICTING LITIGANT BEHAVIOR: THEORETICAL CONCERNS AND EMPIRICAL TESTS

The insightful analysis of Kornhauser and Revesz raises many interesting questions. I would like to focus on three points. First, what, if anything, does the complexity of their analysis, and the incompleteness of the earlier predictions of Easterbrook, Landes, and Posner, tell us about the likelihood that litigants act in accordance with the Kornhauser and Revesz predictions? Put differently, are Kornhauser and Revesz explaining what litigants do or showing them what they should do? Second, can plaintiffs easily circumvent the predicted inhibitory effect on settlement when trial outcomes against the multiple defendants are independent by making settlement offers to the defendants that are contingent on uniform acceptance? Third, I offer some thoughts on how the illuminating theoretical work of Kornhauser and Revesz can inform empirical research in this area.

A. *Does This Analysis Explain What Litigants Do?*

The entire discussion of the effect on settlement of joint and several liability raises some very profound metaissues about the economic analysis of civil procedure, such as those I discussed in an article I wrote analyzing the decision to settle under the American rule or the British rule (where the loser at trial pays the legal fees of the winner).⁹ I noted in that paper that, while Posner and Shavell had predicted that the British rule would inhibit the likelihood of settlement, their model really implied

⁹ John J. Donohue, *Opting for the British Rule, or If Posner and Shavell Can't Remember the Coase Theorem, Who Will?* 104 Harv. L. Rev. 1093 (1991).

that the rate of settlement should be identical in the two cases. The reason was that in the class of cases that Posner and Shavell believed would settle under the American rule, but not under the British rule, the parties would always be better off agreeing to try the case under the British rule. Therefore, as long as parties could costlessly opt for the British rule, the settlement rates would be the same regardless of the ostensible governing rule, as the Coase Theorem would have predicted. The metaissue I raised in that context concerned the nature of the enterprise being undertaken in these economic analyses of litigant behavior. As I somewhat mischievously asked in the subtitle of my paper: "If Posner and Shavell Can't Remember the Coase Theorem, Who Will?" Can we expect the litigants to see things that brilliant legal scholars overlook?

Invoking the same metaissue in the context of the Easterbrook, Landes, and Posner work and the Kornhauser and Revesz extension and correction, we must ask: "Have people understood and therefore acted upon what Kornhauser and Revesz have uncovered, or do many litigants fail to comprehend the complexities of settlement issues under joint and several liability?" Put another way: "How smart is the market? Is the collective wisdom of millions of litigants able to discern and institutionalize what Kornhauser and Revesz have uncovered, or is the market limited to what might appear to be the lesser wisdom possessed by Easterbrook, Landes, and Posner?"

Kornhauser and Revesz have modestly failed to indicate whether they believe that their work describes current litigative practice in the case of joint and several liability or, rather, explains how litigants should analyze cases involving multiple tortfeasors, while recognizing that litigants are not acting in this way at present. An economist would typically assume that everyone is maximizing correctly and, therefore, that Kornhauser and Revesz are merely providing a theoretical explanation of current practice—a descriptive theory. According to this view, which is likely to be true most of the time, economic theories—such as those elaborating value based on the elements of supply and demand—simply explain to the academic world what everyone else has been doing all along. But there have been some important examples, from the proper method of computing the discounted present value of an investment to the appropriate pricing of financial options, where the market muddled along without having the correct methodology until some economist—Irving Fisher in the first case and Fischer Black and Myron Scholes in the second—showed the true path.¹⁰ If the Kornhauser and Revesz work falls into this

¹⁰ For a highly readable account of how a large number of theoretical discoveries of financial economists drastically altered long-standing financial practices on Wall Street, see Peter Bernstein, *Capital Ideas: The Improbable Origins of Modern Wall Street* (1992).

latter category, their article could potentially alter current behavior: We might expect lawyers to process cases differently as they become aware of the subtleties of settlement under the regime of joint and several liability (just as I adumbrated with respect to opting for the British rule in my earlier article). Conversely, if the economist's faith in the wisdom of the market is well-deserved, there should be no change in the way lawyers and litigants behave since they have already figured all this out.

It might seem that if Easterbrook, Landes, and Posner could proclaim flatly that the effect of joint and several liability is to encourage settlement, even though this is not the case for fully solvent defendants when the individual trial outcomes are independent, then it is certainly unlikely that some harried litigant could do better. This would suggest that the Kornhauser and Revesz paper might stand as a counterexample to the economist's conventional wisdom. But it seems quite likely that Easterbrook, Landes, and Posner reached their conclusion because they had a specific type of case in mind—perhaps an antitrust price-fixing case. In that type of case, the assumption that would make their analysis correct—that is, that the trial outcomes were perfectly correlated—might well be plausible.¹¹ In this sense, the analysis of Easterbrook, Landes, and Posner was correct for the specific type of case they were considering. This is indeed one reason why the market tends to get things right: market actors focus only on what they need to know about, which is the specific case before them. So the overbreadth of the Easterbrook, Landes, and Posner assessment may simply be an illustration of obiter dictum of the type unlikely to be produced in market settings. One seeking to buttress the economist's orthodox vision might emphasize that Easterbrook, Landes, and Posner were correct for the case they were considering and, similarly, that litigants confronting a specific fact situation involving joint and several liability are likely to do equally well.

Indeed, the adoption of the opposing heterodox position alters the task of analysis from that of predicting the correct way to approach a problem to predicting the way in which the average person, with the attendant limitations of information and intelligence, would behave. Kornhauser and Revesz's economic orthodoxy leads them to be somewhat unsympathetic to the arguments of the Reagan administration, during the 1985

Bernstein discusses the development of the Black-Scholes option pricing formula at pages 203-30. The widespread and long-enduring failure of business to adopt the correct formula for calculating net present value following its invention by Irving Fisher in 1907 is discussed in Gerald Faulhaber & William Baumol, *Economists as Innovators: Practical Products of Theoretical Research*, 26 *J. Econ. Lit.* 577, 585 (1988).

¹¹ See note 4 *supra*.

debate on reauthorizing Superfund, that joint and several liability promotes settlement because of its tough treatment of defendants who choose to litigate.¹² Indeed, Kornhauser and Revesz stress that this is the prevailing intuition: Because joint and several liability treats defendants more harshly, it makes them more willing to settle. But a heterodox approach might point out that, if this is the widespread intuition, the government arguments during the Superfund debate may not be all that bad. Let us say that you were trying to predict how chess players would respond to a certain move. Would it be better to figure out the best possible response (say, how Bobby Fisher would respond), or would it be better to predict the response of your average chess player? Not all litigants are as smart as Kornhauser and Revesz. If litigants are governed by the prevailing (albeit incorrect) intuition, then joint and several liability might tend to encourage settlement across the board as the Reagan administration (and Easterbrook, Landes, and Posner) have argued.

B. Can Contingent Settlement Offers by the Plaintiff Eliminate the Inhibition of Settlements?

In evaluating the effect of fee-allocation rules on settlement, Posner and Shavell came to strong conclusions based on the assumption that litigants would follow the approach of their model. But, Posner and Shavell overlooked the fact that, if litigants can improve their position by following a different model, they will do so. One of the lessons that I learned from my "Opting for the British Rule" paper is that there is always a way to settle a case when, from the ex ante perspective of the parties, it is efficient to do so. The Kornhauser and Revesz paper would seem to contradict this conclusion, however, because it argues that even in a world of zero transaction costs, the parties in a case of multiple defendants and joint and several liability (with independent trial outcomes) may be strongly pushed toward litigation instead of settlement. But, if my earlier paper has broader applicability, there should be a way to settle such a case. Thus, it is worth considering how to get around the Kornhauser and Revesz prediction in the example above that, without collusion by the defendants, the plaintiff will expect \$750 from litigation and less than that from settlement.

In fact, there is a way. The plaintiff can simply make a contingent settlement offer to both parties: "You must both give me \$375 or we go to trial." That way, the plaintiff gets her \$750, and trial is avoided. Since

¹² Kornhauser & Revesz, *Multidefendant Settlements: The Impact of Joint and Several Liability*, *supra* note 1, text at note 4.

Kornhauser and Revesz state that “there are no constraints on the types of settlement offers that the plaintiff can make,” this contingent offer would appear to be permissible.¹³

Without this contingent offer, the two defendants in a case of independent trial outcomes are in a Prisoner’s Dilemma situation. When they are independently offered a settlement of \$375, each defendant reasons as follows: “If the other defendant rejects the offer and I reject, my expected loss from going to trial will be \$375. If the other defendant accepts the offer, I should reject in order to get the setoff external benefit described above. Thus, rejection of the settlement offer is the dominant strategy since I will be no worse off from rejecting, and may be better off (if the other party settles).” With the contingent offer, though, the plaintiff can remove the incentive to reject since neither party will get the external benefit—the plaintiff will go straight to trial if either defendant rejects. In essence, the contingent offer makes each defendant choose between paying \$375 in settlement now or in expected value after trial. Consequently, they will both choose settlement (owing to risk aversion, or due to the Kornhauser and Revesz decision rule that in cases of indifference between trial and settlement, the parties choose settlement).

Once again, there is some tension in models of litigant behavior that arrive at strong predictions about how litigants will behave based on the presumed ability of litigants to solve rather complex problems but which implicitly restrict litigants from selecting other attractive options that would lead to contrary predictions. The choice for scholars is more complex than simply deciding whether to assume that litigants are rational utility maximizers, one also needs to consider the degree of sophistication in creative contracting that they are assumed to possess.¹⁴

¹³ *Id.* at text around note 10.

¹⁴ Thus, Posner and Shavell assumed that litigants would perceive that the settlement range is narrower under the British rule than under the American rule, prompting the prediction that the British rule would generate fewer settlements. Posner and Shavell overlooked, however, that fully rational and highly intelligent litigants who were following the Posner/Shavell model of settlement would act contrary to the Posner/Shavell prediction if they also perceived the option of choosing between the British rule and the American rule at the same time they were deciding how to act under a fixed rule. Kornhauser and Revesz similarly generate a prediction on the inhibitory effect of joint and several liability on settlement based on a highly sophisticated analysis, even though an added dimension of foresight and creative contracting on the part of the litigants might avoid this inhibitory effect. I am reminded of the fact that for hundreds of years, physicists of the highest order, including Einstein, overlooked that a direct implication of Newton’s theory of gravity was that the universe had to be either expanding or contracting, since gravity was operating on all the bodies in the universe. So great was the power of the presupposition of the constancy

C. Avenues for Empirical Exploration

The insightful theoretical work of Kornhauser and Revesz generates the opportunity for interesting empirical testing. Their work informs us that independence in the probabilities of success at trial between the joint tortfeasors encourages litigation, while dependence in these probabilities encourages settlement. Similarly, insolvency on the part of some defendants can encourage settlement. Therefore, in order to know whether joint and several liability on balance promotes or inhibits settlement, one would need to know something about the dependence of trial outcomes for the multiple defendants, and the prevalence of limited solvency among the defendants. No one to my knowledge has ever explored these issues, but Kornhauser and Revesz have now given us a reason to pursue these empirical questions. In addition, their work illuminates how such empirical work might proceed and be interpreted.

The simplest inquiry might involve looking at cases of joint tortfeasors that go to trial in order to determine whether the probability of victory against d_1 is correlated with that against d_2 . Kornhauser and Revesz have predicted, however, that when these probabilities are dependent, the parties are more likely to settle their dispute. Because of this predicted selection effect—*independence encourages litigation and dependence encourages settlement* (by at least one tortfeasor, so we might not have trial outcomes for multiple defendants)—the bias is against finding the correlation. If the empirical inquiry revealed that the trial outcomes against the defendants were dependent, then this might suggest that, on the whole, joint and several liability encourages settlement (that is, the prevailing intuition would be correct). Conversely, if we were to find that the outcomes were independent, we would not necessarily reject the prevailing intuition because the selection bias would operate in the direction of finding independence. As a result, such a finding would be consistent with a number of possibilities: (1) the cases of dependence in the probabilities simply do not go to trial, as the Kornhauser and Revesz model predicts; (2) the percentage of cases in which there is dependence among the trial outcomes is small or nonexistent; or (3) the cases of dependence disproportionately settle for some other reason, such as higher anticipated litigation costs or more frequent insolvency on the part

of the universe that a direct and logical outflow of existing theory was overlooked for centuries. See Stephen W. Hawking, *A Brief History of Time: From the Big Bang to Black Holes* (1988).

of some defendants (although there is no reason for suspecting these traits to be more prevalent in cases of dependence).

In conclusion, Kornhauser and Revesz have given us a provocative series of papers that go beyond the theoretical work of previous scholars in analyzing the implications of joint and several liability and, indeed, largely reverses or limits the previous predictions. Their work raises important issues about the entire enterprise of complex economic analysis of litigant behavior, and they have provided fruitful avenues for future empirical exploration.