The Selection of Disputes at Forty

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Priest and Klein's Selection of Disputes for Litigation *has been one of the most influential legal articles of all time. This Essay reviews its contribution to legal scholarship. Priest and Klein's central and enduring contribution is the recognition that some cases are more likely to settle than others. It follows that litigated disputes are not a random sample of all disputes. This basic insight is true under nearly all litigation models and is also confirmed by a large body of empirical evidence. Priest and Klein's article is also famous for its prediction that, under certain conditions, the plaintiff trial win rate will approach fifty percent. That prediction, however, is not supported by most other litigation models and has received only modest support from the empirical literature. Our citation analysis also suggests that* The Selection of Disputes for Litigation *is one of the rare articles whose importance was both recognized almost immediately and whose influence has continued to grow over several decades.*

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Introduction

What types of legal disputes go to trial rather than settle? Is there a systematic difference between disputes that go to trial and those that settle? If so, what are the implications for empirical work and the evolution of the common law? These were some of the questions that motivated George Priest and Benjamin Klein's 1984 article, *The Selection of Disputes for Litigation*.[1] In that article, they hypothesized that "the disputes selected for litigation . . . will constitute neither a random nor a representative sample of the set of all disputes."[2] More famously, but also more controversially, they predicted that, under certain conditions, there will be "a strong bias toward a rate of success for plaintiffs at trial . . . of 50 percent regardless of the substantive standard of law."[3]

Priest and Klein's article has been one of the most influential legal articles of all time. According to one well-recognized methodology, it is currently ranked 47th in citations among all legal articles, and 8th among law-and-economics articles.[4] Its most enduring contribution is the idea that litigated cases are not a random sample of all disputes ("The Trial Selection Hypothesis"). The significance of this insight was immediately recognized,[5] and its importance has only grown as legal scholarship has become more empirical. Although the model Priest and Klein used has been largely eclipsed by modern asymmetric-information models,[6] the Trial Selection Hypothesis remains valid even under those more popular models.[7] Empirical work has largely confirmed the validity of the Trial Selection Hypothesis, and scholars ignore it at their peril.

Unfortunately, *The Selection of Disputes* is often remembered only for its prediction that plaintiffs will tend to win fifty percent of cases that go to trial. Unlike the Trial Selection Hypothesis, this prediction is not supported by most litigation models,[8] nor is it supported by the large body

1. George L. Priest & Benjamin Klein, *The Selection of Disputes for Litigation*, 13 J. LEGAL STUD. 1 (1984).

2. *Id.* at 4.

3. *Id.* at 5. There is some ambiguity in what Priest and Klein may have meant here. In our previous work, we distinguished between two possible interpretations: "The Fifty-Percent Limit Hypothesis" and "The Fifty-Percent Bias Hypothesis." *See* Yoon-Ho Alex Lee & Daniel Klerman, *The Priest-Klein Hypotheses: Proofs and Generality*, 48 INT'L REV. L. & ECON. 59, 60 (2016). *See infra* Section I.A.

4. *See infra* Part III.

5. *See, e.g.*, Donald A. Wittman, *Is the Selection of Cases for Trial Biased?*, 14 J. LEGAL STUD. 185, 212 (1985) ("In their seminal work Priest and Klein raised the important issue of selectivity bias."). *See also* Peter Siegelman & Joel Waldfogel, *Toward a Taxonomy of Disputes: New Evidence Through the Prism of the Priest/Klein Model*, 28 J. LEGAL STUD. 101, 103 (1999).

6. *See infra* Subsection I.B.2.

7. *See, e.g.*, Daniel Klerman & Yoon-Ho Alex Lee, *Inferences from Litigated Cases*, 43 J. LEGAL STUD. 209, 210 (2014).

8. *See, e.g.*, Steven Shavell, *Any Frequency of Plaintiff Victory at Trial Is Possible*, 25 J. LEGAL STUD. 493, 493 (1996). *See also* Daniel Klerman et al., *Litigation and Selection with Correlated Two-Sided Incomplete Information*, 20 AM. L. & ECON. REV. 382, 382 (2018).

of empirical work that has tested it.[9] One problem with testing this prediction, however, is that, analytically, there are two possible interpretations as to what Priest and Klein meant. On the one hand, it could mean that plaintiff trial win rates will *approach* fifty percent *in the limit* as parties' predictions about trial outcomes become increasingly accurate ("The Fifty-Percent Limit Hypothesis"). On the other hand, it could mean that the observed win rate among tried cases will be *closer to* fifty percent than if the entire universe of disputes had gone to trial ("The Fifty-Percent Bias Hypothesis"). Priest and Klein certainly did not mean that the plaintiff win rate will always be fifty percent. In any case, it turns out neither of the two possible interpretations of the fifty-percent prediction mentioned above is easy to test: one cannot observe the win rate in the limit because, in the limit, the rate of trial would go to zero and there would be no litigation; and one can seldom know the win rate among the entire universe of disputes because the entire universe includes settled cases for which there is no adjudication.

Priest and Klein were also careful to note that the fifty-percent prediction would only apply if the stakes were symmetric. When stakes are asymmetric, by contrast, they predicted that plaintiff win rates would be higher (lower) than fifty percent when plaintiffs (defendants) have more at stake.[10] This prediction ("The Asymmetric Stakes Hypothesis") has been partially confirmed by empirical testing.[11]

Finally, because Priest and Klein believed that selection effects were strong and that plaintiff trial win rates would reflect the relative stakes of the parties, they thought that no inferences could be drawn from plaintiff trial win rates about the legal standard (e.g., whether the standard favored the plaintiff or the defendant), about the quality of cases (whether they were mostly meritorious or baseless cases), or about legal change.[12] We call this the "The No Inferences Hypothesis." This hypothesis cast doubt on many forms of empirical analysis, but its validity, even under Priest and Klein's original model, depends on empirical assumptions regarding settlement rates and litigation costs that are largely false. It also has been shown to be untrue under more modern, asymmetric information models.[13] The limited empirical testing relating to the No Inferences Hypothesis also suggests it is false.[14]

The rest of this Essay is organized as follows. Part I discusses Priest and Klein's theory: their model, criticisms, and responses to those

9. *See infra* Part II.

10. *See* Priest & Klein (1984), *supra* note 1, at 25.

11. *See infra* Section II.C.

12. *See* Priest & Klein (1984), *supra* note 1, at 31.

13. *See generally* Klerman & Lee (2014), *supra* note 7, at 216-21 (analytically illustrating that inferences can be drawn from litigated cases across various classes of litigation models).

14. *See infra* Section II.D.

criticisms. Part II provides a review of the empirical evidence. Part III discusses the impact of Priest and Klein's article using citation analysis.

I. Theoretical Issues

We begin by describing Priest and Klein's original model and then discuss several criticisms of the theoretical part of the article.

A. *Priest & Klein's Original Model*

Priest and Klein's model builds on the model pioneered by William Landes, Richard Posner, and J.P. Gould (LPG),[15] but is significantly more complex. Whereas the LPG model starts from the plaintiff's and the defendant's subjective estimates of the probability that the plaintiff will prevail at trial, Priest and Klein's model derives those subjective probabilities from "fact space."[16] This approach is to be distinguished from nearly all other models, including asymmetric-information models (such as those developed by Bebchuk[17] or by Reinganum and Wilde[18]), all of which start with "probability space." In these later models, a case comes with an objective probability of win for the plaintiff, and one party may know the probability, one party may know only the distribution of probabilities, or parties may form estimates with error. But the basic structure of the model always starts with the party estimates of the plaintiff's probability of prevailing.

From this perspective, Priest and Klein's model is nearly unique. It assumes that cases can be placed on the real line based on how far the defendant's behavior has deviated from the legal standard, itself represented as a discrete point on the real line. Cases to the left of that point are ones that the defendant will win; cases to the right are those that the plaintiff will win. The objective probability that the plaintiff will prevail is either 0 or 1. But parties do not know the precise location of their case; instead, they estimate it with error that is normally distributed with a known standard error. As a result, each party estimates the probability that the plaintiff will prevail subject to her (imperfect) case estimate.

More formally, each dispute is a number, $y \in \boldsymbol{R}$. There is also an underlying distribution of all disputes (e.g., the set of all accidents),

15. *See* William M. Landes, *An Economic Analysis of the Courts*, 14 J. L. & ECON. 61 (1971); John P. Gould, *The Economics of Legal Conflicts*, 2 J. LEGAL STUD. 279 (1973); and Richard A. Posner, *An Economic Approach to Legal Procedure and Judicial Administration*, 2 J. LEGAL STUD. 399 (1973).

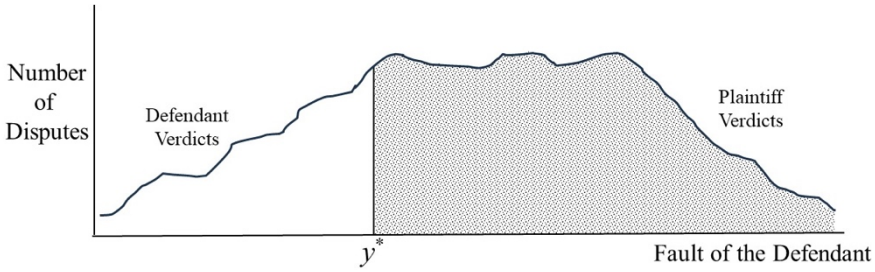
16. "Fact space" can also be called "case space." *See* Klerman et al. (2018), *supra* note 8, at 385-86.

17. Lucian Arye Bebchuk, *Litigation and Settlement Under Imperfect Information*, 15 RAND J. ECON. 404 (1984).

18. Jennifer F. Reinganum & Louis L. Wilde, *Settlement, Litigation, and the Allocation of Litigation Costs*, 17 RAND J. ECON. 557 (1986).

represented as a probability distribution $f(\cdot)$ over $\boldsymbol{R}$. The decision standard is set as $y^* \in \boldsymbol{R}$, and all fact patterns lying above or equal to y^* will be ruled in favor of the plaintiff, while all remaining fact patterns will be ruled in favor of the defendant.[19] An area of law that fits the model nicely is the law of negligence: in a dispute involving negligence, the less care the defendant exercised, the more the case is to the right; thus, y^* would represent the lowest amount of care that would be considered non-negligent.

Figure 1. The Underlying Distribution of Disputes



Both parties know $y^* \in \boldsymbol{R}$, but there is uncertainty as to y. Each party estimates y with some error: $y_d = y + \epsilon_d$ is the defendant's estimate, and $y_p = y + \epsilon_p$ is the plaintiff's estimate, where ϵ_p and ϵ_d are independent errors normally distributed around 0 with a standard deviation of $\sigma > 0$. Knowing that her observation is subject to error, the plaintiff estimates the probability P_p that the true y^* is less than y, and the defendant estimates the same probability as P_d.[20]

Priest and Klein then use the LPG condition to predict that cases will go to trial if and only if:

$$P_p J - C_p + S_p > P_d J + C_d - S_d,$$

or

$$P_p - P_d > (C - S)/J,$$

where J is the damages, and C_p and C_d are the trial costs for the plaintiff and defendant, respectively, and the costs of settling are, likewise, S_p and

19. *See* Figure 1.

20. The literature has gone back and forth as to whether P_d is the defendant's probability estimate of the defendant prevailing at trial or the plaintiff prevailing at trial. *Compare* George L. Priest, *Selective Characteristics of Litigation*, 9 J. LEGAL STUD. 399, 401 (1980) *with* Priest & Klein (1984), *supra* note 1, at 11. In this Essay, we work with the notation from Priest & Klein (1984).

S_d.[21] Let $C = C_p + C_d$ and $S = S_p + S_d$.[22] Priest and Klein assumed that this LPG condition is both necessary and sufficient for trial. The assumption that the LPG condition is sufficient for the parties to go to trial is inarguable: it simply implies that the case will go to trial if there's no settlement amount that both sides would prefer over going to trial. The assumption that this condition is also necessary, however, is much less obvious: it would imply that as long as a settlement amount that both sides would prefer over going to trial exists, the parties will in fact settle.[23]

The above-described set-up produces a one-to-one mapping from fact space, $\boldsymbol{R}$, to probability space, [0,1]. A necessary but important feature of this mapping is that a fixed difference in fact space can correspond to larger or smaller differences between P_p and P_d in probability space, depending on whether the differences in fact space are close or far from y^*. This follows from the assumption that errors are distributed normally, as illustrated in Figures 2a and 2b and as explained in the rest of this paragraph. If, for example, the plaintiff's case estimate (y_p) is on the decision standard (Figure 2a), the plaintiff's probability estimate is 50% because half of the normal distribution is to the right of y^*. If the defendant's case estimate (y_d) is one standard deviation to the left, the fraction of the distribution to the right of y^*, and thus the defendant's probability estimate is 16%. So the difference in their probability estimates, $P_p - P_d$, is large, 34%, which, by the LPG condition, means that litigation is likely. In contrast, suppose y_p is two standard deviations to the left of y^* (Figure 2b). In this situation, the fraction of the error distribution to the right of y^*, and thus the plaintiff's probability estimate, is only 2.2%. If y_d is again one standard deviation to the left of y_p, the defendant's corresponding probability estimate falls to 0.1%. So the difference in their probability estimates, $P_p - P_d$, is now small, 2.1%, which, by the LPG condition, means that litigation is very unlikely. That is, a one-standard deviation difference in fact space causes nearly a 34 percentage-point change in probability space when the plaintiff's estimate is on the decision standard, y^*, but the same one-standard-deviation difference in fact space causes barely a 2 percentage-point change in probability space when the plaintiff's estimate is far from y^*.

21. This formulation assumes that parties are risk-neutral and their utilities are determined by expected values. Accordingly, each party simply compares the expected value of trial to the value of settlement. Earlier works by Landes and Gould allowed for risk-aversion. *See* Landes (1971), *supra* note 15, at 67; Gould (1973), *supra* note 15, at 285. Posner simplified the expression by (implicitly) assuming risk-neutrality. *See* Posner (1973), *supra* note 15, at 419 n.29. Priest and Klein's formulation is consistent with Posner's formulation.

22. Note that the setup assumes the parties have symmetric stakes, in that the plaintiff stands to win J, the same amount the defendant stands to lose. With asymmetric stakes, the inequality would be modified—by assuming the defendant stands to lose αJ, where $\alpha > 0$ and can also be larger than 1.

23. *See infra* Subsection I.B.2.

Figure 2a. Individual Probability Estimates of Parties, Plaintiff

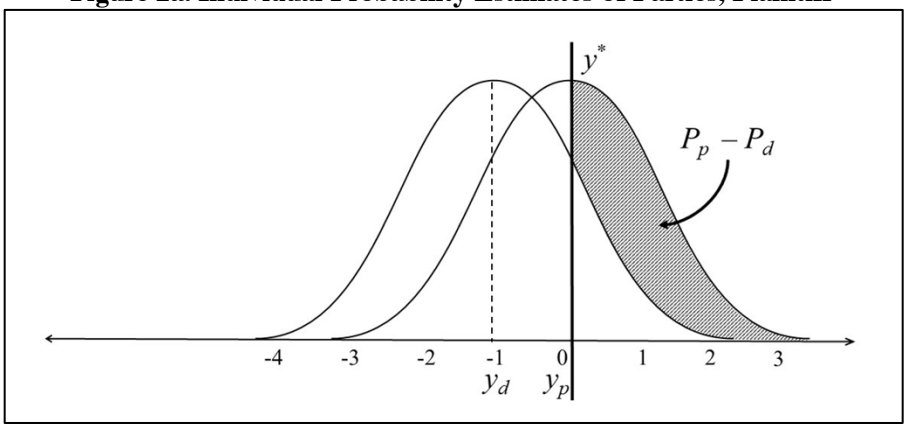
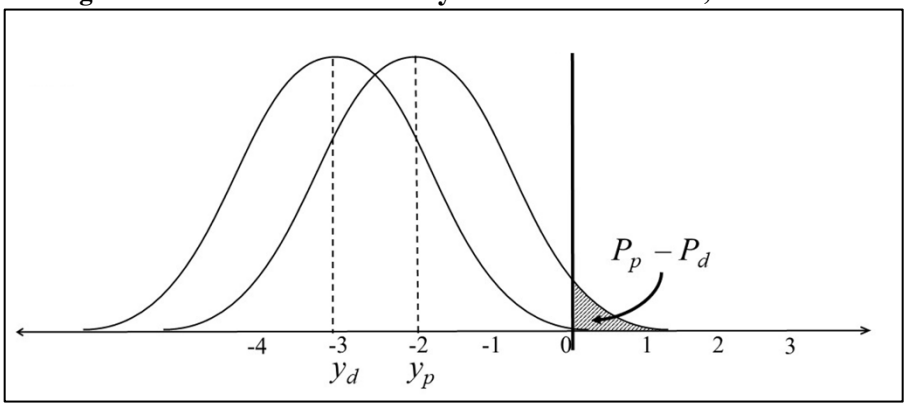


Figure 2b. Individual Probability Estimates of Parties, Defendant



As discussed below, this aspect of the model—that differences in estimates near the decision standard produce much larger differences in subjective probability estimates than those far from the decision standard—drives the Fifty-Percent Limit Hypothesis. Unfortunately, this set-up involving two normal distributions also leads to enormous complexity. It is probably what prompted Priest and Klein to use graphical illustrations rather than analytic proofs. It is also probably one of the reasons—along with the shift to asymmetric information models—why few legal scholars have since applied their model to analyze settlement or other aspects of litigation.[24]

24. Notable exceptions are three articles co-authored by the present authors. Klerman & Lee (2014), *supra* note 7; Lee & Klerman (2016), *supra* note 3; and Klerman et al. (2018), *supra* note 8. William H. J. Hubbard, *Testing for Change in Procedural Standards, with Application to* Bell Atlantic *v*. Twombly, 42 J. LEGAL STUD. 35, 45-48 (2013) also uses the Priest-Klein model to

Given this complexity, it is worth asking why Priest and Klein chose this modeling strategy. One possibility is that they wanted to be able to assume that parties' estimates are unbiased and homoscedastic (that is, the variance of the error does not change across the fundamentals). This is not possible in probability space because it presents an end-point problem: if there is a true probability that the plaintiff will prevail and each party estimates it with error that is symmetric and has a fixed standard deviation, the model will simply not work because if the probability is sufficiently close to zero or one, the assumption of symmetric and fixed standard deviations means that a party will estimate the probability to be either less than zero or greater than one, which is impossible. Working with fact space as the entire real line with no end points allows the model to avoid this problem.

In Priest and Klein's model, because the difference in subjective probability estimates is more likely to be large when the true value of the case, y, is close to y^*, the left-hand side of the LPG condition above, $P_p - P_d$, is also more likely to be large—thus, the inequality is more likely to be satisfied—when estimates in fact space are close to y^*. Thus, all else equal, "close-call" cases (cases where the defendant's liability is a close call because the fact pattern lies close to y^*) are more likely to go to trial. This is the underlying selection effect captured by the model. When this selection effect is so strong, cases going to trial will tend to lie very close to y^* and will tend to contain approximately as many cases to the right of the decision standard as those to the left—regardless of the underlying distribution of disputes. Accordingly, among litigated cases, the plaintiff's probability of prevailing will be close to fifty percent. In fact, if one takes the limit as parties become increasingly accurate in their predictions—that is, as σ approaches zero—the plaintiff trial win rate will converge to fifty percent exactly, regardless of the location of the decision standard or the underlying distribution of disputes, as long as the plaintiff and defendant have equal stakes. This irrelevance of the underlying dispute distributions or the location of y^* with regard to the plaintiff trial win rate also explains Priest and Klein's motivation for hypothesizing why no inferences can be made regarding the legal standard by observing win rates at trial.

The implications of the model can then be summarized in the five hypotheses discussed in the Introduction, which we restate here:[25]

> *Trial Selection Hypothesis.* The set of disputes that reach trial are not a random sample of all disputes.

analyze the effect of *Twombly*, although he uses graphical analysis similar that in Priest and Klein's original article rather than attempting mathematical proofs.

25. Lee & Klerman (2016), *supra* note 3, discuss one more hypothesis, "The Irrelevance of Dispute Distribution Hypothesis," which states that the win rate in the limit does not depend on the shape of the distribution of disputes.

Fifty-Percent Limit Hypothesis. As the parties become increasingly accurate in predicting case merit, the plaintiff win rate in litigated cases will *converge* to fifty percent.

Fifty-Percent Bias Hypothesis. The plaintiff trial win rate will be closer to fifty percent than the percentage of cases plaintiff would have won if all disputes went to trial.

Asymmetric Stakes Hypothesis. If defendant has more to lose from an adverse judgment than plaintiff would gain, then plaintiff will win less than fifty percent of the litigated cases. Conversely, if plaintiff has more to gain, then plaintiff will win more than fifty percent.

No Inferences Hypothesis. Because selection effects are so strong, no inferences can be made about the legal standard or legal decisionmakers from observing the percentage of plaintiff trial victories.

B. Criticisms

In this section, we discuss three criticisms of the theoretical part of Priest and Klein's original article.

1. Priest and Klein did not prove their results.

Priest and Klein set out a model but did not prove their results analytically. Instead, they included informal and graphical arguments. The lack of mathematical rigor made it difficult for the reader to understand the precise formulations of their predictions or to have confidence that such predictions were true even under the model's own assumptions. The first scholar to formalize the model (without proving any propositions) was Waldfogel in 1995.[26] Later, Shavell in a footnote discussed the steps that would need to be proved to formalize the model.[27] But the formal proofs remained elusive until 2016, more than 30 years after the article's publication, when Lee and Klerman published *The Priest-Klein Hypotheses: Proofs and Generality*. That article provided proofs for the propositions implicit in *The Selection of Disputes*, and found that several of them—specifically, the Trial Selection Hypothesis, the Fifty-Percent Limit Hypothesis, and the Asymmetric Stakes Hypothesis—were true under Priest and Klein's own assumptions, and, in fact, under a wider set of assumptions.[28] The Fifty-Percent Bias Hypothesis will sometimes be true, but its validity will depend on the distribution of disputes and the

26. Joel Waldfogel, *The Selection Hypothesis and the Relationship Between Trial and Plaintiff Victory*, 103 J. POL. ECON. 229, 232-38 (1995).

27. *See* Shavell (1996), *supra* note 8, at 499, n.20.

28. They also showed that the Irrelevance of Dispute Distribution Hypothesis was true. *See* Lee & Klerman (2016), *supra* note 3, at 68.

accuracy of party predictions about trial outcomes. As discussed below, the No Inferences Hypothesis is false under a large set of plausible assumptions.

2. Priest and Klein's model does not reflect developments in game theory or asymmetric information.

In the mid-1980s, just as Priest and Klein were developing their model, other scholars were beginning to use game theory, information economics, and bargaining theory to develop models of litigation. P'ng[29] and Bebchuk[30] pioneered the use of screening models, and Reinganum and Wilde[31] were the first to use signaling models. These models had several advantages over Priest and Klein's model: (1) they grounded the parties' different estimates of the plaintiff's probability of prevailing in differences in information (and thus could use models from information economics), (2) they used bargaining protocols that were consistent with bargaining theory,[32] and (3) they were more mathematically tractable.

Although these models were not primarily developed to analyze selection, their popularity encouraged law and economics scholars to revisit Priest and Klein's claims. For instance, Hylton[33] and Shavell[34] showed that there was no tendency for plaintiffs to win fifty percent under the screening model developed by P'ng and Bebchuk.[35] Hylton showed that the more informed party would generally prevail more often,[36] while

29. Ivan P'ng, *Strategic Behavior in Suit, Settlement, and Trial*, 14 BELL J. ECON. 539 (1983).

30. Bebchuk (1984), *supra* note 17.

31. Reinganum & Wilde (1986), *supra* note 18.

32. Recall that the model assumes the parties will go to trial *if and only if* $P_pJ - C_p + S_p > P_dJ + C_d - S_d$. This assumes efficient bargaining: all parties who *can* achieve a mutually beneficial outcome *will* indeed reach one. But this is not obvious, and this problem belongs to a line of literature in mechanism design that started in 1983 with Roger B. Myerson & Mark A. Satterthwaite, *Efficient Mechanisms for Bilateral Trading*, 29 J. ECON. THEORY 265 (1983). We refer the reader to our earlier work for an expanded discussion on this point. *See* Lee & Klerman (2016), *supra* note 3, at 61. To be fair, efficient bargaining was commonly assumed by others as well. Shavell assumed it in his 1982 paper and Wittman assumed the same in his 1985 and 1988 papers. *See* Steven Shavell, *Suit, Settlement, and Trial: A Theoretical Analysis Under Alternative Methods for the Allocation of Legal Costs*, 11 J. LEGAL STUD. 55, 63 n.35 (1982); Wittman (1985), *supra* note 5; and Donald A. Wittman, *Dispute Resolution, Bargaining, and the Selection of Cases for Trial*, 17 J. LEGAL STUD. 313 (1988). Modern asymmetric information models, by contrast, specify the explicit bargaining mechanism and thus need not make this assumption.

33. *See* Keith N. Hylton, *Asymmetric Information and the Selection of Disputes for Litigation*, 22 J. LEGAL STUD. 187 (1993).

34. *See* Shavell (1996), *supra* note 8.

35. Hylton and Shavell did not directly contradict the Fifty-Percent Limit Hypothesis because in asymmetric information models the prediction errors do not converge to zero. Their work more directly contradicts the Fifty-Percent Bias Hypothesis, although they did not distinguish between the two.

36. *See* Hylton (1993), *supra* note 33.

Shavell proved that "any frequency of plaintiff victory at trial is possible," depending on the underlying distribution of party types.[37]

Klerman and Lee (2014) analyzed the selection effects of the screening and signaling models and showed that there were strong selection effects under both models. That is, although Hylton and Shavell showed that the fifty-percent prediction did not hold under asymmetric information models, Priest and Klein's more fundamental finding, the Trial Selection Hypothesis, remained valid. Consider, for example, a screening model where the defendant is the informed party, and the uninformed plaintiff makes a take-it-or-leave it offer. In such a model, those defendants more likely to be found liable are more likely to accept settlement offers. As a result, the defendants who litigate are less likely to be found liable at trial, and the plaintiff trial win rate is lower than the win rate if all cases had been litigated. Klerman and Lee (2014) further showed that, under both the screening and signaling models, the No Inferences Hypothesis was invalid.[38] In other words, in many plausible settings, one should be able to make some inferences about the legal standard by observing plaintiff trial win rates (e.g., across decisionmakers or over time). To the best of our knowledge, no one has examined the Asymmetric Stakes Hypothesis under asymmetric information models.

The canonical signaling and screening models were one-sided in that only one side was fully informed and the other only knew the distribution of case types. Some scholars proposed two-sided incomplete information models, in which neither side was fully informed.[39] Although those models tend to be much more complex, some, such as Friedman and Wittman's,[40] had selection implications similar to Priest and Klein's: under some conditions, close cases would be more likely to litigate, and the plaintiff trial win rate might be close to fifty percent. Klerman, Lee & Liu[41] explored a two-sided incomplete information model that is similar in spirit to Priest and Klein's original model in that fact space is primitive and the parties' signals about case merit are correlated with true case merit (and thus with each other). The article shows that, under some reasonable assumptions—including two commonly-used bargaining protocols (take-it-or-leave it

37. *See* Shavell (1996), *supra* note 8.

38. *See* Klerman & Lee (2014), *supra* note 7.

39. *See, e.g.*, Urs Schweizer, *Litigation and Settlement Under Two-Sided Incomplete Information*, 56 REV. ECON. STUD. 163 (1989); Andrew Daughety & Jennifer F. Reinganum, *Settlement Negotiations with Two-Sided Asymmetric Information: Model Duality, Information Distribution, and Efficiency*, 14 INT'L REV. L. & ECON. 283 (1994); and Daniel Friedman & Donald Wittman, *Litigation with Symmetric Bargaining and Two-Sided Incomplete Information*, 23 J. L. ECON. & ORG. 98 (2007).

40. *See id.* at 108 ("Thus, when the cost of a trial is high, our model's results parallel the results of the Priest and Klein model.").

41. *See* Klerman et al. (2018), *supra* note 8.

offers or the Chatterjee-Samuelson mechanism)[42]—the Fifty-Percent Limit Hypothesis remains valid. The upshot is that Priest and Klein's most famous prediction is not a consequence of their reliance on the older Landes-Posner-Gould model of litigation but is also valid under a more general incomplete information model.

3. Priest and Klein's result is a limiting result.

Two hypotheses in Priest and Klein's articles are limiting results, making assertions about what happens as prediction errors ϵ_p and ϵ_d approach zero: the Fifty-Percent Limit Hypothesis and the Asymmetric Stakes Hypothesis.[43] Priest and Klein thought the limit was empirically relevant because they thought settlement rates were very high—so that the limit was a good approximation of the actual. Based on available evidence showing that the trial rate in the United States was only one percent, they inferred that the settlement rate was ninety-nine percent,[44] which is plausibly close to the limit—where all cases would settle. Nevertheless, later research has shown that it is a mistake to assume that the settlement rate is one minus the trial rate because many cases are resolved by motions (such as summary judgment).[45] A better estimate of the settlement rate in the United States is around two-thirds, and outside the United States often twenty percent or lower,[46] which would imply that party estimates are not as accurate and that reality is far from the limit. The limiting results are, therefore, likely to be empirically irrelevant.

Even the predictions away from the limit turn out to be false unless some strong assumptions are made. As discussed above, the Fifty-Percent Bias Hypothesis will be true only when one makes a strong assumption about the underlying distribution of disputes. In *Inferences from Litigated Cases*, Klerman and Lee show that the No Inferences Hypothesis is largely false, both under Priest and Klein's original model and under standard asymmetric-information models.[47] Under Priest and Klein's original model, valid inferences can still be made (under plausible assumptions regarding the distribution of disputes) because, away from the limit, selection effects are only partial. But whenever there are trials to study,

42. Under the Chatterjee-Samuelson mechanism, each party submits a secret demand or offer to a third party. If the plaintiff's offer is less than or equal to the defendant's offer, the case settles for the average value. Otherwise, the case goes to trial. *See* Kalyan Chatterjee & William Samuelson, *Bargaining Under Incomplete Information*, 31 OPER. RSCH. 835 (1983).

43. As Lee & Klerman (2016) explain, the Irrelevance of Dispute Distribution Hypothesis is also a limiting result. *See* Lee & Klerman (2016), *supra* note 3, at 60.

44. *See* Priest & Klein (1984), *supra* note 1, at 24.

45. *See, e.g.*, Theodore Eisenberg & Charlotte Lanver, *What is the Settlement Rate and Why Should We Care?*, 6 J. EMPIRICAL LEGAL STUD. 111, 128 tbl. 2 (2009); Yun-chien Chang & Daniel Klerman, *Settlement Around the World: Settlement Rates in the Largest Economies*, 14 J. LEGAL. ANALYSIS. 80, 85-90 (2022).

46. *See generally id.*

47. *See generally* Klerman & Lee (2014), *supra* note 7.

one is studying situations away from the limit. To be sure, Priest and Klein acknowledge that the inferences would be possible if party prediction errors were large,[48] but their interpretation of the available empirical evidence was that prediction errors were extremely small. Thus, part of Priest and Klein's error can be attributed to the fact that they thought settlement rates were higher than later research showed they were. In addition, their underestimation of prediction errors follows from theoretical mistakes in estimating parameters relating to litigation costs in their model.[49]

C. Summary

Priest and Klein's fundamental insight—that settlement is not random and thus that scholars must take into account selection—has been confirmed in various models and has become widely accepted.[50] Priest and Klein's famous prediction that fifty percent of tried cases will result in plaintiff victories has fared less well, although it can be proven analytically based on their original model and is valid under a two-sided asymmetric information model that updates their original model. The No Inferences Hypothesis is false in many plausible settings. Other hypotheses implicit in Priest and Klein's article have been subject to less careful analysis and are probably only partly valid.

II. Empirical Evidence

This section analyzes the empirical support for each of the hypotheses set out in the prior section. Because the empirical literature is vast, this survey will highlight a few articles that we think are particularly important and representative of the literature as a whole.

A. *Trial Selection Hypothesis*

The Trial Selection Hypothesis suggests that cases that go to trial are not a random sample of all disputes. The best tests for this hypothesis therefore compare settled cases to litigated cases. Such studies, however,

48. *See id.* at 232

49. *See id.* at 232-33. Recall that the condition for trial is $P_p - P_d > (C - S)/J$. To calculate $(C - S)/J$ one needs to know the difference between C and S. Priest and Klein estimated that $(C - S)/J$ was one third because the contingent fee percentage was usually one-third, but the contingent-fee percentage is not a good way to estimate $(C - S)/J$. In fact, under a simple 33 percent contingent-fee arrangement, $(C - S)/J = 0$, because the plaintiff would pay 33 percent whether the case was settled or litigated, so $C = S$. Also, the contingent fee percentage is only the plaintiff's share of litigation costs, whereas C and S in $(C - S)/J$ refers to the sum of plaintiff's and defendant's costs.

50. To the best of our knowledge, the only model with no selection effects was discussed in Eric Helland et al., *Maybe There is No Bias in the Selection of Disputes for Litigation*, 174 J. INST'L & THEORETICAL ECON. 143 (2018). Nearly all empirical evidence suggests some selection, albeit not necessarily towards fifty percent or in other ways suggested by Priest and Klein.

tend to be rare because there is usually very little information about settled cases.

Perhaps the best test is by Studdert and Mello.[51] They asked experts to review claim files in medical malpractice cases and to assess whether the claims involved medical error. Because the experts reviewed files for both settled and litigated cases, their study provides direct evidence of selection. One of their findings is that "[c]laims involving errors were much less likely to be resolved by trial than were nonerror claims (10% versus 23%, $p < 0.001$)."[52] This suggests significant amounts of selection: "error claims" (cases where the defendant was more likely to be found liable) were less than half as likely to go to trial than "nonerror claims." Put differently, parties settled meritorious claims more often than unmeritorious claims. This is powerful and direct evidence of selection.

Klerman[53] provides a different (though in some ways similar) test. Klerman examined thirteenth-century private criminal prosecutions. During the early part of the thirteenth century, such disputes could be settled. Later, judges disallowed settlements and took jury verdicts in cases where the parties had settled. For a time, parties were likely surprised that their settlements were not respected. By comparing jury verdicts in settled and litigated cases during that surprise period, one can test the Trial Selection Hypothesis. As predicted, litigated and settled cases were very different. Defendants were guilty more than twice as often in litigated cases than in settled cases (82% versus 37%, $p < 0.001$).

Helland, Klerman, and Lee[54] provide another test of the Trial Selection Hypothesis. They used confidential closing statements from New York City contingent-fee cases, which include settlement amounts as well as trial awards. They showed that the expected value of trial awards (the damages awarded at trial times the overall probability that the plaintiff would prevail) was almost identical in its mean and in its distribution to the mean and distribution of settlements. Their finding was unusual in that it suggested that there was little or no selection: parties were not more (or less) likely to settle high-value (or low-value) disputes.

Lederman[55] compares characteristics of cases that settled and those that went to trial. She examined tax court cases and found, contrary to Helland, Klerman, and Lee's work, that cases with higher stakes were more

51. David M. Studdert & Michelle M. Mello, *When Tort Resolutions Are "Wrong": Predictors of Discordant Outcomes in Medical Malpractice Litigation*, 36 J. LEGAL STUD. S47 (2007).

52. *Id.* at S69.

53. Daniel Klerman, *The Selection of 13th-Century Disputes for Litigation*, 9 J. EMPIRICAL LEGAL STUD. 320, 335 (2012).

54. Helland et al. (2018), *supra* note 50.

55. Leandra Lederman, *Which Cases Go to Trial?: An Empirical Study of Predictors of Failure to Settle*, 49 CASE W. RES. L. REV. 315, 318 (1999).

likely to go to trial, suggesting an important way in which tried cases are different from those that were settled.

B. The Fifty-Percent Limit and Bias Hypotheses

As already noted, the Fifty-Percent Limit Hypothesis asserts that, as parties become increasingly accurate in predicting trial outcomes, the plaintiff trial win rate will converge toward fifty percent (if the parties' stakes are equal). The Fifty-Percent Bias Hypothesis asserts that the observed rate of plaintiff trial victories will be closer to fifty percent than the rate of plaintiff victories if all cases (including those that had settled) had been litigated, again assuming the parties' stakes are equal. These hypotheses are difficult to test for three reasons: (1) the Limit Hypothesis is about a limit which is never directly observed, (2) the Bias Hypothesis requires information about settled cases that is almost never available, and (3) both hypotheses assume the parties have symmetric stakes, which is often not the case. Most empirical tests of the "Priest-Klein Hypothesis" ignore these complications and simply ask whether the observed trial win rate is fifty percent. This would be plausible if trials were so infrequent that one could assume that the real world was very close to the limit, and if one assumes symmetric stakes. Unfortunately, as pointed out in *Inferences from Litigated Cases*, it is unlikely that even American litigation is close to the limit, in spite of relatively high settlement rates.[56] Outside the common-law world, settlement rates are much lower,[57] and it is implausible to assume that observed cases are anywhere close to the limit. In addition, as discussed below, stakes are likely to be asymmetric in a large fraction of cases.

One of the most sophisticated empirical studies of the selection of disputes for litigation is Waldfogel's article *The Selection Hypothesis and the Relationship between Trial and Plaintiff Victory*.[58] Waldfogel examines the relationship between the plaintiff trial win rate and the trial rate. It finds that the plaintiff trial win rate is very close to fifty percent when the trial rate is low (e.g., ten percent), but that there are wide deviations from fifty percent when the trial rate is high. This is best seen as evidence for the Fifty-Percent Limit Hypothesis. The lower the trial rate, the more accurate the parties' prediction, the closer the win rate is to fifty percent.

56. *See* Klerman & Lee (2014), *supra* note 7, at 232-34.

57. *See* Chang & Klerman (2022), *supra* note 46; Yun-chien Chang & William H.J. Hubbard, *New Empirical Tests for Classic Litigation Selection Models: Evidence from a Low Settlement Environment*, 23 AM. L. & ECON. REV. 348, 350-51 (2021).

58. Waldfogel (1995), *supra* note 26.

Many studies examine whether the win rate in tried cases is fifty percent. Nearly all find it is not.[59] As noted above, however, this is not necessarily inconsistent with Priest and Klein's article because (a) the stakes may have been asymmetric (so the articles cannot properly test either the Limit Hypothesis or the Bias Hypothesis), (b) litigation rates may have been sufficiently high to suggest that the real world was far from the limit (so the articles cannot properly test the Limit Hypothesis), and/or (c) the studies have no data on settled cases (so they cannot properly test the Bias Hypothesis).

C. The Asymmetric Stakes Hypothesis

The Asymmetric Stakes Hypothesis states that, in the limit, as parties' predictions become more accurate, the plaintiff trial win rate will converge to more than fifty percent if the plaintiff has more at stake, and to less than fifty percent if the defendant has more at stake. As with the Fifty-Percent Limit Hypothesis, this hypothesis is hard to test unless one assumes that party estimates are very accurate and therefore that the world is close to the limit, which is probably not correct. Another problem is that the researcher seldom has good information about the stakes in individual cases but rather must make assumptions about case categories. For example, a researcher might make the plausible assumption that the stakes are higher for defendants in medical malpractice cases because the defendants' reputations would be negatively affected by a finding of malpractice.

Priest and Klein themselves, in examining Cook County litigation data, explained many of the deviations from fifty percent as likely resulting from asymmetric stakes.[60] The studies by Klerman and by Studdert and Mello discussed above[61] also provide some support for the Asymmetric Stakes Hypothesis. Both found low plaintiff trial win rates in circumstances where the defendant plausibly had more at stake. Studdert and Mello examined medical malpractice cases where, as discussed above, the defendants' reputational interest meant they had more at stake.[62] Klerman studied criminal cases where the sanctions were usually fines paid to the state, so the defendant paid more than the plaintiff received and thus had

59. *See, e.g.*, Alexandra D. Lahav & Peter Siegelman, *The Curious Incident of the Falling Win Rate: Individual vs System-Level Justification and the Rule of Law*, 52 U.C. DAVIS L. REV. 1371 (2019); Chang & Hubbard (2021), *supra* note 58; Samuel Gross & Kent Syverud, *Getting to No: A Study of Settlement Negotiations and the Selection of Cases for Trial*, 90 MICH. L. REV. 319 (1991); J. Mark Ramseyer & Minoru Nakazato, *The Rational Litigant: Settlement Amounts and Verdict Rates in Japan*, 18 J. LEGAL STUD. 263 (1989); Theodore Eisenberg, *Testing the Selection Effect: A New Theoretical Framework with Empirical Tests*, 19 J. LEGAL STUD. 337 (1990).

60. Priest & Klein (1984), *supra* note 1, at 39-40.

61. *See supra* Section II.A.

62. *See* Studdert & Mello (2007), *supra* note 51, at S72.

more at stake.[63] Unfortunately, the low plaintiff win rates in both of these articles could also be interpreted as resulting from asymmetric information. As Klerman and Lee point out,[64] asymmetric information models predict that the party with better information will win more often, and it is plausible that both medical malpractice defendants (e.g., doctors) and criminal defendants have better information about their liability than plaintiffs or private prosecutors.

Kessler et al. provide a more rigorous test of the Asymmetric Stakes Hypothesis.[65] They examine plaintiff win rates for a variety of case types, and run regressions to see if various factors, including asymmetric stakes, explain deviations from the fifty-percent prediction. They found only weak evidence in favor of the Asymmetric Stakes Hypothesis: when the defendant had higher stakes, the plaintiff trial win rate was 3.8 percent lower, which accords with the Hypothesis, but the *p*-value was between five and ten percent, which is usually considered borderline statistically significant. The article also tested other possible reasons, only some of which were suggested by Priest and Klein, as to why there might be deviations from fifty percent, including asymmetric information, disputes about damages rather than liability, high stakes, and agency problems. Most of these alternative explanations had significant explanatory power and are in the spirit of Priest and Klein's article.

D. The No Inferences Hypothesis

The No Inferences Hypothesis asserts that selection effects are so powerful that changes in case quality or legal changes will have no effect on the plaintiff trial win rate. We are aware of only one article that tests this hypothesis. Siegelman and Donohue analyzed employment discrimination cases and hypothesized that lower-quality cases were likely to be brought in recessions because plaintiffs were less likely to find new work and thus more likely to sue.[66] If the No Inferences Hypothesis were correct, the plaintiff trial win rate should be the same during recessions as during other times, but Siegelman and Donohue find it goes down, suggesting—as Klerman and Lee show theory predicts[67]—that selection effects are partial and that the No Inferences Hypothesis is incorrect. The No Inferences Hypothesis is also contradicted by the many studies showing

63. *See* Klerman (2012), *supra* note 53, at 328.

64. *See supra* text accompanying note 38. *See also* Klerman (2012), *supra* note 53, at 340.

65. Daniel P. Kessler et al., *Explaining Deviations from the Fifty-Percent Rule: A Multimodal Approach to the Selection of Cases for Litigation*, 25 J. LEGAL STUD. 233 (1996).

66. Peter Siegelman & John J. Donohue, III, *The Selection of Employment Discrimination Disputes for Litigation: Using Business Cycle Effects to Test the Priest-Klein Hypothesis*, 24 J. LEGAL STUD. 427, 431 (1995).

67. *See* Klerman & Lee (2014), *supra* note 7, at 209.

that decisionmaker characteristics, such as race, gender, and appointing president, affect outcomes.[68]

E. Conclusions

It has been surprisingly difficult to properly test the hypotheses in *The Selection of Disputes*. The best evidence suggests that the Trial Selection Hypothesis is correct and is Priest and Klein's most lasting conclusion. The evidence in favor of the Fifty-Percent Limit Hypothesis, the Fifty-Percent Bias Hypothesis, and the Asymmetric Stakes Hypothesis is weak and at least partially negative. Although there is little evidence on the No Inferences Hypothesis, it is of high quality and strongly suggests the hypothesis is incorrect.

III. Assessing the Impact of *The Selection of Disputes*

This Part uses citation analysis to quantify the influence of Priest and Klein's article and to compare it to other articles published around the same time. We use the methodology developed by Fred Shapiro. His method includes both citations in legal citations from HeinOnline as well as citations in non-legal literatures from the Web of Science.[69]

Figure 3 below shows the rankings over time of articles published between 1980 and 1988 that were included in Shapiro's 1996 list of the top 100 articles.[70] These articles provide a suitable comparison group because they are the articles published within four years of *The Selection of Disputes*, which was published in 1984, and because they were all considered to be influential in the decade following their publication. The figure then shows the ranking of each article over time. Shapiro published his first rankings in 1985,[71] but no article published in the 1980s made that list. He also published the lists in 1996 and 2012. We replicated his methodology to create rankings for 2024.

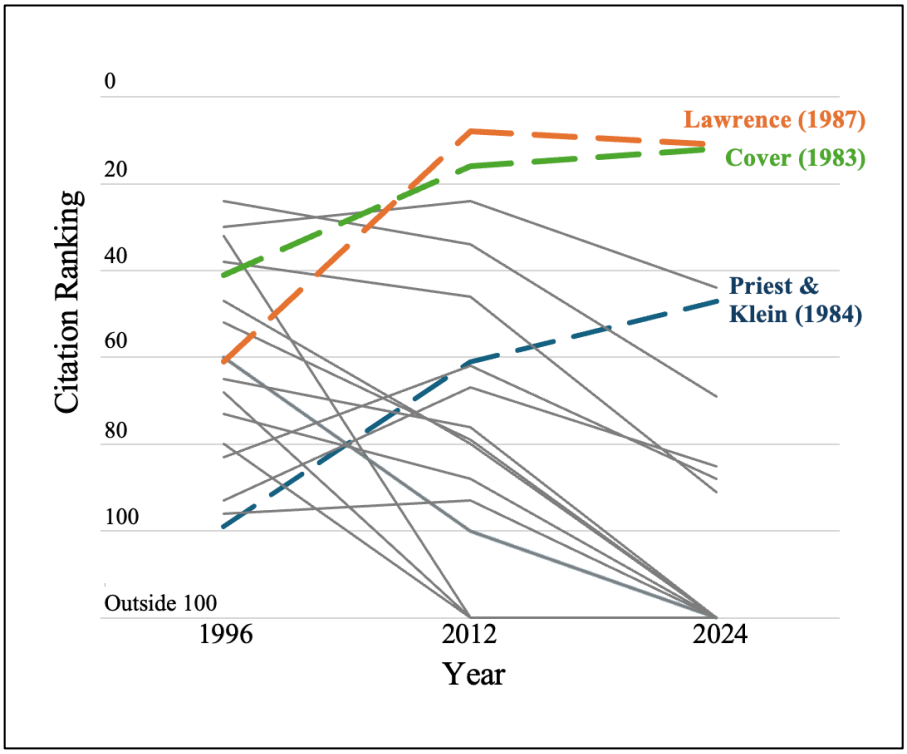
68. LEE EPSTEIN ET AL., THE BEHAVIOR OF FEDERAL JUDGES: A THEORETICAL AND EMPIRICAL STUDY OF RATIONAL CHOICE (2012); Carol T. Kulik et al., *Here Comes the Judge: The Influence of Judge Personal Characteristics on Federal Sexual Harassment Case Outcomes*, 27 LAW HUM. BEHAV. 69, 82 (2003).

69. For details, see Fred R. Shapiro & Michelle Pearse, *The Most-Cited Law Review Articles of All Time*, 110 MICH. L. REV. 1483, 1486-87 (2012).

70. *See* Fred R. Shapiro, *The Most-Cited Law Review Articles Revisited*, 71 CHI.-KENT. L. REV. 751 (1996).

71. Fred R. Shapiro, *The Most-Cited Law Review Articles*, 73 CAL. L. REV. 1540 (1985).

Figure 3. Citation Ranking in 1996, 2012, and 2024: Influential Articles Published 1980–1988.



Note: Dashed lines indicate improvement in rank from 1996 to 2024.

The figure shows that Priest and Klein's article is almost unique among contemporary articles in that it both made the top-100 list in 1996 and improved its ranking in each subsequent list. Only Robert Cover's, *Nomos and Narrative* also made the top-100 list in 1996 and advanced in each subsequent list, and Charles R. Lawrence, III's *The Id, the Ego, and Equal Protection* is the only other article from 1980–1988 that made the top-100 list in 1996 and ranked higher in 2024 than in 1996. This is a testament to the fact that Priest and Klein's work was almost immediately recognized as important and that its importance has increased over time. Its steady advance in the ranking probably reflects the empirical turn in law. Empirical studies often use cases as data, so rigorous scholars must address the issue of selection. Because Priest and Klein's article was the first to seriously raise and address that issue, empirical articles often cite it, even if they are not testing the fifty-percent prediction.

Although, as measured by 2024 citation rankings, it is not the most influential law-and-economics article, *The Selection of Disputes* is near the top. Seminal works by Coase and Calabresi and Melamed make the top 10 in terms of citations, which Priest and Klein's article does not. Five other

law-and-economics articles, including Hansmann's work on nonprofit enterprises and Kaplow's on rules and standards, have more citations.[72] It is interesting that none of Posner's work still makes the top 100. Several of Posner's articles made the top-100 lists in 1996 and 2012,[73] but they have not had the staying power of *The Selection of Disputes*, and all dropped out of the top 100 by 2024.

Conclusion

The contribution of a theory should not be measured solely by the extent to which later work, whether theoretical or empirical, confirms its hypotheses. By that measure, *The Selection of Disputes* is only a partial success. Empirical evidence supporting its hypotheses is mixed, and theoretical developments cast doubt on some of its central predictions. A better measure is whether the theory identifies an important area of research and sets out new questions and issues to consider. By that measure, *The Selection of Disputes* has been a tremendous success. As increasing rates of citation suggest, the importance of Priest and Klein's article has grown as legal scholarship has become more and more empirical. Every serious piece of empirical scholarship using case data must grapple with selection, and that, along with the innovative ways scholars address the selection problem, is the enduring contribution of *The Selection of Disputes for Litigation*.[74]

72. These include: Ronald H. Coase, *The Problem of Social Cost*, 3 J. L. & ECON. 1 (1960); Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089 (1972); Robert H. Mnookin & Lewis Kornhauser, *Bargaining in the Shadow of the Law: The Case of Divorce*, 88 YALE L.J. 950 (1979); Christine Jolls et al., *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471 (1998); Henry Hansmann, *The Role of Nonprofit Enterprise*, 89 YALE L.J. 835 (1980); Ian Ayres & Robert Gertner, *Filling Gaps in Incomplete Contracts: An Economic Theory of Default Rules*, 99 YALE L.J. 87 (1989); Louis Kaplow, *Rules Versus Standards: An Economic Analysis*, 42 DUKE L.J. 557 (1992). Of course, the category of "law and economics" is somewhat unclear, and one could debate whether one or two of those articles belong in the category.

73. Richard A. Posner, *Theories of Economic Regulation*, 5 BELL J. ECON. & MGMT. SCI. 335 (1974) (ranked 64th in 2012); Richard A. Posner, *A Theory of Negligence*, 1 J. LEGAL STUD. 29 (1972) (ranked 38th in 1996); Posner, *supra* note 15 (ranked 77th in 1996).

74. One notable area in which selection effects have been a significant part of the debate has been the analysis of the effects of *Twombly* and *Iqbal*. *See, e.g.*, Hubbard (2013), *supra* note 24 (using graphical analysis based on the Priest-Klein model); Jonah B. Gelbach, Note, *Locking the Doors to Discovery? Assessing the Effects of* Twombly *and* Iqbal *on Access to Discovery,* 121 YALE L.J. 2270 (2012) (using a novel approach to analyze selection effects).