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Shay Lavie

Avraham Tabbach

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LITIGATION SIGNALS

Shay Lavie and Avraham Tabbach*

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* Assistant Professor, Tel Aviv University Faculty of Law; Professor, Tel Aviv University Faculty of Law. We are grateful to Kevin Clermont, Ed Cooper, Daniel Hemel, Dan Klerman, Jonathan Nash, J.J. Prescott, Roy Shapira, Kathy Spier, Jennifer Shkabatour, and participants in the Junior Faculty Federal Courts Workshop, Tel Aviv University faculty seminar, the Canadian Law and Economics Association annual conference, and the law & economics workshops at the University of Michigan, the University of Chicago, and the Hebrew University of Jerusalem for helpful discussions and comments. We are grateful to two leading law firms and the Jerusalem District Attorney's Office for the opportunity to present our research and interview attorneys from their civil litigation departments. We thank Ofir Givati, Sharon Salinas, and Shir Shrem for excellent research assistance. This research project was supported by the Israeli Science Foundation (grant No. 1708/16). Shay Lavie thanks the Cegla Center for Interdisciplinary Research of the Law at Tel Aviv University for supporting the work on this Article.

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INTRODUCTION

In 2015 new amendments to the Federal Rules of Civil Procedure took effect.¹ The most important of which constrain the right to discovery in civil proceedings. These changes have roused “passionate” responses from different stakeholders,² and they reflect a fiery debate on plaintiffs’ rights to force defendants to share information. The most divisive debates revolve around asymmetric information situations. In these settings, the plaintiff lacks information on the merits of her case, which resides with the defendant—for instance, typical medical malpractice cases. On the one hand, discovery imposes extensive expense on informed defendants, inviting opportunities for abuse and pushing defendants to settle non-meritorious cases.³ On the other hand, absent broad discovery uninformed plaintiffs may choose to drop meritorious claims, leading to “a significant decrease in enforcement and vindication” of rights.⁴ Indeed, asymmetric information situations, and the scope of desired discovery therein, are apparently “[t]he most important problem in dispute resolution.”⁵

This Article proposes a new theoretical basis for this debate. The current discourse presupposes that in asymmetric information situations formal discovery is essential to force defendants to reveal privately-held information, which can be “only gained through some court-supervised

1. E.g., Adam N. Steinman, *The End of An Era? Federal Civil Procedure After the 2015 Amendments*, 66 EMORY L. J. 1, 3 (2016)

2. Patricia W. Hatamyar Moore, *The Anti-Plaintiff Pending Amendments to the Federal Rules of Civil Procedure and the Pro-Defendant Composition of the Federal Rulemaking Committees*, 83 U. CIN. L. REV. 1083, 1112 (2015).

3. *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 559 (2007).

4. Howard M. Wasserman, *Iqbal, Procedural Mismatches, and Civil Rights Litigation*, 14 LEWIS & CLARK L. REV. 157 (2010).

5. Robert J. Rhee, *Toward Procedural Optionality: Private Ordering of Public Adjudication*, 84 N.Y.U. L. REV. 514, 548 (2009).

discovery.”⁶ Our point of departure is different. We argue that informed defendants can “signal” relevant information to uninformed plaintiffs without formal discovery.

Consider an uninformed victim who files a lawsuit against a doctor without knowing whether the defendant-doctor is negligent. A non-negligent doctor is motivated to indicate the strength of her defense to the plaintiff—since if she can convince the uninformed plaintiff of her merits, the plaintiff will be induced to drop the suit or agree to a smaller settlement. In fact, an informed party can employ a variety of litigation strategies to achieve this goal. For instance, a non-negligent doctor can send the plaintiff the following message:

You sued me in a state court. I can remove the case to a federal court, which is, as we both know, a better forum for defendants. Nonetheless, I forego my right to transfer the case. I am willing to do so because I know that I was not negligent and I would like to convince you that if you move forward you will lose the case.⁷

The defendant’s willingness to voluntarily drop a useful litigation right is puzzling. Perhaps, but we claim that it is rational. Negligent defendants would not hasten to “disarm” themselves of the right to litigate in a pro-defendant, federal forum. In contrast, non-negligent doctors are more confident about their odds at trial and, hence, are more willing to offer this type of proposal. Moreover, by doing so, they indicate their strength to their rivals.

Other common litigation strategies potentially fulfill a signaling function. Different waivers of procedural rights and defenses can indicate the strength of the waiving party.⁸ One-way fee-shifting stipulations can have a close signaling quality and convey a litigant’s confidence by voluntarily promising to pay her rival’s expenses in case of a loss.⁹ Likewise, defendants sometimes agree to a partial settlement in which they stipulate to generous damages while the case is being tried on the question of liability only.¹⁰ Such a defendant asserts, in essence, that she is not liable. In a similar vein, in mediation and arbitration proceedings parties are occasionally asked to “bet” on their settlement offers, such that they are penalized in case the judge or arbitrator rules against them.¹¹ On the face of it, these litigation strategies appear

6. See Wasserman, *supra* note 4, at 169.

7. See *infra* notes 232–43 and accompanying text (discussing the actual case that inspired this example).

8. See *infra* Part II.B.2.

9. See *infra* Part II.B.1.

10. See *infra* Part II.B.3.

11. See *infra* notes 128–33 and accompanying text.

incomprehensive—but we claim that they can be understood as mechanisms to transmit information between the parties without judicial intervention. Broadly speaking, we refer to these moves as “litigation signals.”

This Article is the first to offer a comprehensive theory of litigation signals. To do so, we recognize different types of signals and use these distinctions to identify workable and non-workable signals. Given the heated debate over the acceptable scope of discovery,¹² and the potential of litigation signals to convey information without formal, judge-supervised discovery, the scholarly disregard for litigation signals is unfortunate. A better understanding of litigation signals has important and timely implications for the desirable design of civil procedure and court rules. More generally, literature tends to treat settlements simplistically, without heeding to the possibility of more complex agreements, e.g., conditional commitments dependent on success.¹³ In this sense, this Article further develops a contemporary line in literature that studies more sophisticated settlements.¹⁴

Part I provides background for the Article, explicating the nature of asymmetric information situations. Part II explains the concept of “signaling,” which is used more often in other disciplines. As this Part shows, several litigation strategies can serve as signals; one-way fee-shifting, waiving claims and defenses, and generous liability-only agreements are paradigmatic examples.

Part III analyzes litigation signals more closely, relying on a game-theoretical analysis of settlements. We examine three types of signals: unilateral, third party, and cooperative. Unilateral litigation signals are strategies that convey information—but do not require cooperation between parties, e.g., “I waive my statute of limitations defense to signal my strength.” While these signals seem intuitive, we show that in fact they are not likely to occur in practice as they are typically costly to employ.¹⁵ Informed defendants—those who use unilateral signals—are more likely to settle.¹⁶ With that, once “disarmed,” and taken to trial, they can expect to pay higher compensation. For similar reasons, a

12. See, e.g., *supra* notes 2–4 and accompanying text and *infra* notes 173–75 and accompanying text (discussing the debate over the scope of discovery proceedings).

13. Cf. J.J. Prescott & Kathryn E. Spier, *A Comprehensive Theory of Civil Settlement*, 91 N.Y.U. L. REV. 59 (2016) (analyzing more complex, partial settlements, and discuss the differences between partial and the more commonly discussed, full-settlements. *Id.*, at 60–67).

14. *Id.* (studying more sophisticated settlements but assume no asymmetric information).

15. For a discussion and a graphic illustration see *infra* notes 110–12 and accompanying text.

16. See *infra* note 106 and accompanying text.

plaintiff who receives a unilateral signal has more leverage in settlement negotiations as going to trial becomes more attractive to the plaintiff. Third-party signals involve promises related to parties—other than the plaintiff and the defendant, e.g., “If you pursue adjudication and I lose, I promise to donate a certain amount to charity as a signal of my strength.” We demonstrate that these signals are less costly for informed defendants and hence more likely to be used than unilateral signals. This is because they prevent the plaintiff from taking advantage of the defendant’s signal (the money goes to charity, rather than to the plaintiff). Nonetheless, in typical cases, informed defendants will refrain from employing these signals—if the dispute is tried, these signaling defendants will have to pay more than they should (with the additional money going to charity). “Cooperative” signals require more intricate agreements between parties, e.g., “If you take me to trial, I will waive my jurisdiction defense, but in exchange you will pay me a specified amount.” These signals solve the problems associated with unilateral and third-party signals, and in principle, they can always benefit informed defendants who desire to indicate their strength. However, the cooperative nature of these signals requires increased transaction costs and greater sophistication. Against this backdrop, Part III proceeds to discuss litigation signals in actual settlement negotiations.¹⁷ On the one hand, there seem to be several limitations on the use of litigation signals—for example, the most effective cooperative signals require greater transaction costs.¹⁸ On the other hand, while direct empirical data is difficult to collect, real-world evidence supports the use of litigation signals. While litigants rarely fully tap benefits of litigation signals, they do employ them to some extent, especially in the basic form of non-monetary commitments, e.g., waiving important claims and defenses.

Part IV discusses the normative implications of our analysis. First, the Article offers an alternative outlook on the contemporary discovery debate. Simply put, we challenge the notion that in asymmetric information situations formal discovery is essential for conveying information. Importantly, our litigation signals framework explains how parties could implicitly transmit information even when they cannot directly do so. This suggests that the real effect of a narrower right to discovery may be more limited than commonly conceived. In addition, the capacity of litigants to signal information and avoid costly discovery also indicates that the costs of discovery are lower than expected.

17. We devote *infra* Part III.B. to the discussion of litigation signals in actual settlement agreements.

18. We summarize the differences between the various signaling techniques below, *infra* page 32.

Second, the discussion on litigation signals pertains to parties' optimal freedom to choose their own procedures—with greater leeway to waive claims and defenses, signaling is easier. While parties can generally fashion their procedures, several rules undermine the use of litigation signals. Some states, for example, forbid voluntary one-way fee-shifting.¹⁹ The Federal Rules of Civil Procedure, to mention another example, allow litigants to freely add claims and defenses, weakening the ability of informed parties to signal by credibly waiving claims and defenses.²⁰ This Article suggests therefore a more nuanced application of these rules. Third, discussing litigation signals will hopefully urge courts to create procedures facilitating signaling. A simple mechanism could enable informed litigants to promise to pay, contingent on losing the case, an additional amount into court's coffers—a signaling device that can be effective in some cases.

We conclude that there is more room to utilize litigation signals, and we end our Article with a call for lawyers to engage in proactive and explicit signaling practices in asymmetric information situations.

I. THE ASYMMETRIC INFORMATION PROBLEM

Parties to a legal process have strong reasons to settle. As litigation is costly to both sides, we should expect the parties to seek a contractual solution—settlement—that saves their joint litigation costs.²¹ Indeed, the vast majority of cases settle.²² Cases that fail to settle are aberrations. In this reality, and given the vast expenses of litigation,²³ it is all the more important to understand the process leading to settlements and the reasons for settlement breakdowns.

Starting with Bebchuk and Reinganum and Wilde, the literature has offered a powerful analytical tool for understanding settlement failures—*asymmetric information*.²⁴ The idea is straightforward: in

19. See *infra* note 205 and accompanying text.

20. See *Infra* note 219 (discussing FED. R. CIV. P. 15(a)(2)).

21. The logic is similar to that presented by Ronald H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960).

22. In the federal courts, for example, an estimated 2% of civil cases go to trial. Kathryn E. Spier, *Litigation*, in 1 HANDBOOK OF LAW AND ECONOMICS 259, 268 (A. Mitchell Polinsky & Steven Shavell eds., 2007).

23. *Id.* at 262–64. See also STEVEN SHAVELL, FOUNDATIONS OF ECONOMIC ANALYSIS OF LAW 281 (2004) (“[I]n the United States the administrative costs of the liability system are large . . . for every dollar received by a victim, a dollar or more is spent delivering the dollar to him.”).

24. Lucian A. Bebchuk, *Litigation and Settlement under Imperfect Information*, 15 RAND J. ECON. 404 (1984) (showing how some settlements are prevented under a theoretical model in which defendants have private information and the uninformed plaintiff holds all bargaining power); Jennifer Reinganum & Louis Wilde, *Settlement, Litigation, and the*

many instances one of the parties holds relevant information, whereas the rival party is unaware of that information. In these situations the uninformed party, who lacks information regarding the value of her suit, is reluctant to agree to settle the case before trial.

Consider the following example. John pursued an unsuccessful medical procedure that left him severely injured. While John may have good reasons to believe that his doctor was negligent, it is also possible that the doctor's behavior was impeccable, and the medical procedure failed for unrelated reasons. Importantly, the relevant information lies with the defendant/doctor, whereas the other party, the plaintiff John, only knows that with some probability the doctor was negligent.

To demonstrate the effect of this information asymmetry, suppose that the uninformed John files a lawsuit and that the defendant/doctor proposes to settle the case for a miniscule sum. John believes that this is a fair settlement, provided that it comes from a non-negligent defendant. However, uncertain about the actual behavior of the doctor, John suspects that the defendant proposes less than she actually should. Therefore, John may well refuse a low settlement offer and pursue a trial.²⁵ In some cases, the foregoing dynamic might lead John to completely drop a meritorious suit—meaning that informed defendants can sometimes avail themselves of plaintiffs' ignorance.²⁶

This simple example also demonstrates other relevant features of the information asymmetry models. First, if the case proceeds to trial, the private information held by the defendant would typically become public, e.g., through testimony or pre-trial discovery.²⁷ The defendant perhaps desires to transmit that information to the plaintiff as early as possible in order to avoid trial, e.g., by handing over evidence that indicates the strength of her claims. In many cases the defendant can indeed convey favorable information directly to the plaintiff. However,

Allocation of Litigation Costs, 17 RAND J. ECON. 557 (1986) (same, under a model in which plaintiffs have private information and bargaining power). See also Kathryn E. Spier, *The Dynamics of Pretrial Negotiation*, 59 REV. ECON. STUD. 93 (1992) (presenting the same logic, with a model that includes several rounds of negotiation); Andrew F. Daughety & Jennifer F. Reinganum, *Revelation and Suppression of Private Information in Settlement-Bargaining Models*, 81 U. CHI. L. REV. 83 (2014) (surveying the literature).

25. See *infra* Part III.A.1 (explaining in detail the game-theoretical foundations of this brief description).

26. This result holds, for example, when John has a good case against negligent defendants, but he is better off not suing non-negligent defendants (*i.e.*, John's claim against the latter is a so-called "negative expected value" suit). See Robert G. Bone, *Modeling Frivolous Suits*, 145 U. PA. L. REV. 519, 542, 550–66 (1997) [hereinafter Bone, *Frivolous Suits*] (analyzing these situations).

27. See, e.g., Robert H. Gertner & Geoffrey P. Miller, *Settlement Escrows*, 24 J. LEGAL STUD. 87, 99 (1995).

in other cases such informational flow is not feasible; for instance, defendants may lack favorable evidence to hand over. More generally, it would sometimes be difficult for the informed defendant to cheaply indicate her private information prior to its revelation at the court.²⁸ In other words, the outcome at trial could reveal information that the parties cannot voluntarily disclose, even if they wish to.²⁹ Second, while litigation can reveal the actual behavior of the doctor during the operation, it entails considerable expense to both sides. Third, the parties are typically aware of their strengths and limitations—the doctor knows that John is uninformed regarding the cause of the failure of the medical procedure; and John understands that the doctor knows the reasons for the failure.³⁰ Fourth, John can assess the likelihood that medical procedures fail due to a doctor's fault; however, he does not know whether *his* surgery did not succeed due to negligent behavior. These assumptions are embedded in virtually all models of this type.³¹

Indeed, medical malpractice is an area of law widely considered to exhibit asymmetric information problems. Typically, the “patient has no direct knowledge of what the doctor did,”³² while the doctor is well-aware of the merits of the case, “the quality of care actually delivered.”³³ In addition to medical malpractice, asymmetric information problems plague other areas of law. Notable examples include discrimination in

28. Cf., Steven Shavell, *Sharing of Information Prior to Settlement or Litigation*, 20 RAND J. ECON. 183, 193 (explaining why, in certain circumstances, it may not be useful for informed parties to reveal favorable information before trial—“it may take time for [the informed party] to assemble evidence; he may know what the evidence will show at trial without being able to convince the [uninformed party] of this beforehand.”).

29. *Id.* More generally, private information could stem from various sources, some of which seem particularly difficult to convey. For instance, the defendant can have private information regarding her capacity to withstand a long trial. For a short discussion and survey of the relevant literature see Shay Lavie, *Asymmetric Information in Litigation*, in ENCYCLOPEDIA OF LAW AND ECONOMICS (Alain Marciano and Giovanni Battista Ramello eds., 2d ed. 2019 forthcoming).

A related point is the feasibility of independent investigation by the uninformed. For instance, in some cases the plaintiff could reveal the defendant's private information prior to filing. However, in typical asymmetric information cases—as the example in the text suggests—such independent investigation seems too costly to pursue. Cf., Bone, *Frivolous Suits*, *supra* note 26 (analyzing the capacity of the uninformed to independently acquire information).

30. In formal terms, the assumption is that aside from the private information all relevant parameters are common knowledge.

31. See, e.g., Daughety & Reinganum, *supra* note 24, at 85–87.

32. Bone, *Frivolous Suits*, *supra* note 26, at 550.

33. Patricia M. Danzon, *Tort Liability: A Minefield for Managed Care?*, 26 J. LEGAL STUD. 491, 495 (1997). See also Robert G. Bone, *Twombly, Pleading Rules, and the Regulation of Court Access*, 94 IOWA L. REV. 873, 926 n.219. (2009) [hereinafter Bone, *Pleading Rules*] (providing references for the asymmetric information phenomenon in medical malpractice cases).

general and employment discrimination in particular. Generally, “unearthing discrimination is difficult [for the plaintiff] because evidence of a defendant’s intent or practices is often in its exclusive possession.”³⁴ For similar reasons, other areas, such as securities fraud, antitrust, and civil rights litigation are also vulnerable to asymmetric information problems.³⁵ Along these lines, asymmetric information is considered to be a major problem in class actions in several areas.³⁶ While the foregoing relates to information that only resides with the defendant, the plaintiff can also possess private information, for example, regarding “the level of damages she has suffered.”³⁷

The literature, then, has recognized asymmetric information as a major problem, perhaps even “[t]he most important problem in dispute resolution.”³⁸ It is difficult to validate empirically the predictions that asymmetric information models generate.³⁹ Nevertheless, what we know

34. Suzette M. Malveaux, *Front Loading and Heavy Lifting: How Pre-Dissmissal Discovery Can Address the Detrimental Effect of Iqbal on Civil Rights Cases*, 14 LEWIS & CLARK L. REV. 65, 91 (2010). See also William H.J. Hubbard, *A Fresh Look at Plausibility Pleading*, 83 U. CHI. L. REV. 693, 714 (2016) (“It is possible that any given one of them was fired for reasons related to intentional discrimination, but it is also possible that any given one of them was fired for entirely separate reasons, such as poor individual performance . . .”).

35. See, e.g., Bone, *Pleading Rules*, *supra* note 33, at 925 & n.217, (explaining why plaintiffs in these situations lack relevant information); Wasserman, *supra* note 4, at 168 (“The two most notable pieces of information that are beyond plaintiff’s reach at the outset are evidence of defendants’ subjective state of mind and evidence of defendants’ private, behind-closed-doors conduct, [particularly affecting] a range of constitutional rights . . .” (footnote omitted)).

36. E.g., Alon Klement, *Threats to Sue and Cost Divisibility Under Asymmetric Information*, 23 INT’L REV. L. & ECON. 261, 262 (2003) (“class action defendants often hold private information concerning their liability, whereas no such information is available to the dispersed, low interested plaintiff class”); Jessica Erickson, *Heightened Procedure*, 102 IOWA L. REV. 61, 76 (2016) (discussing securities class actions).

37. Spier, *supra* note 22, at 272. As before, in case plaintiffs have private information, defendants can only know the distribution of possible harm among different plaintiffs.

38. Rhee, *supra* note 5, at 548.

39. “[T]he empirical work so far has to be considered preliminary.” Keith N. Hylton & Haizhen Lin, *Trial Selection Theory and Evidence*, in 8 ENCYCLOPEDIA OF LAW AND ECONOMICS—PROCEDURAL LAW AND ECONOMICS 487, 505 (Chris William Sanchirico ed., 2d ed. 2012). The predictions of asymmetric information models should be compared to other models, and in particular the influential model presented in George L. Priest & Benjamin Klein, *The Selection of Disputes for Litigation*, 13 J. LEGAL STUD. 1 (1984). In a nutshell, unlike the asymmetric information notion, Priest & Klein assume that both parties have divergent expectations with regard to the result at trial—e.g., mutual uncertainty about the way in which the presiding judge will interpret the law. These two theories entail different predictions. Mutual, divergent expectations “impl[y] that the selection of cases that go to trial involves cases wherein the likelihood of either side winning approaches 50%”; in contrast, asymmetric information models predict that the failure to settle will result in skewed win rates. Andrew F. Daughety & Jennifer F. Reinganum, *Settlement*, in 8 ENCYCLOPEDIA OF LAW AND ECONOMICS—PROCEDURAL LAW AND ECONOMICS 386, 439 (Chris William Sanchirico ed.,

to date seems at least partly consistent with the asymmetric information premise.⁴⁰

A straightforward remedy for the asymmetric information problem is formal, court-supervised discovery, which forces the informed defendant to provide information to the uninformed plaintiff. This important role of discovery proceedings has garnered considerable attention among scholars who study the legal process.⁴¹ As the heated debate over the 2015 amendments suggests, in asymmetric information cases “only formal discovery is able to provide plaintiffs with information necessary” to proceed.⁴² This Article takes a different approach. Instead of court-supervised formal discovery proceedings to transmit information, we highlight the power of informed parties to independently convey their privately-held information to their rivals, in myriad ways. To do so, we use the concept known as signaling.

II. SIGNALING IN SETTLEMENT NEGOTIATIONS

A. Signaling and Asymmetric Information

Asymmetric information is not unique to legal settings. Tools that were developed in other disciplines can be useful to our understanding of legal disputes. Notably, economics literature utilizes the concept of “signaling” to analyze asymmetric information settings.⁴³ Signaling

2d ed. 2012).

40. In line with the predictions of asymmetric information models, in areas in which defendants typically possess informational advantages their win rate with respect to cases that made it to trial is higher than 50%. Keith N. Hylton & Haizhen Lin, *Trial Selection Theory and Evidence*, in 8 ENCYCLOPEDIA OF LAW AND ECONOMICS—PROCEDURAL LAW AND ECONOMICS 487, 500–01 (Chris William Sanchirico ed., 2d ed. 2012). Note that the divergent expectations model also gains empirical support. For example, *id.*, at 501–05 (surveying empirical studies); Joel Waldfogel, *Reconciling Asymmetric Information and Divergent Expectations Theories of Litigation*, 41 J.L. & ECON. 451 (1998) (attempting at reconciling conflicting evidence and suggesting that asymmetric information models are more consistent with cases that terminated before discovery); Daniel Klerman, *The Selection of Thirteenth-Century Disputes for Litigation*, 9 J. EMPIRICAL LEGAL STUD. 320 (2012) (presenting evidence that are consistent with both theories).

41. See, e.g., Bruce L. Hay, *Civil Discovery: Its Effects and Optimal Scope*, 23 J. LEGAL STUD. 481 (1994) (discussing the effects of discovery); Amy Farmer & Paul Pecorino, *Civil Litigation with Mandatory Discovery and Voluntary Transmission of Private Information*, 34 J. LEGAL STUD. 137 (2005) (exploring the role of mandatory discovery versus voluntary disclosure); Malveaux, *supra* note 34 (discussing the role of discovery proceedings in civil rights cases).

42. JUDICIAL CONFERENCE ADVISORY COMM. ON CIVIL RULES & COMM. ON RULES OF PRACTICE & PROCEDURE, REPORT TO THE CHIEF JUSTICE OF THE UNITED STATES ON THE 2010 CONFERENCE ON CIVIL LITIGATION 6 (2010), <http://www.uscourts.gov/file/reporttothechiefjusticepdf>; see also Wasserman, *supra* note 4.

43. For a discussion of several examples see *infra* notes 49–50, 53 and accompanying

refers to the power of informed parties to convey their private characteristics to uninformed parties, where the latter cannot otherwise observe these traits.⁴⁴ For simplicity, we can think that, from the perspective of the uninformed party, there are “good” and “bad” types of informed parties, which can diverge, for example, with regard to the merits of their case, the quality of their product or service, etc.⁴⁵ In the absence of concrete information, the uninformed party would treat “good” and “bad” types of informed parties identically. Hence, the “good” informed types would have an incentive to signal their quality to the uninformed party, in order to distinguish themselves from the bad types, in anticipation of receiving a better treatment. But in order for the signal to be informative, it has to be a signal that the bad type would not find worthwhile to mimic. Otherwise, the bad types would send the same signal as the good types, and the signal would lose its informative value.

In a seminal article published in 1973, economics Nobel laureate Michael Spence offered the first signaling model.⁴⁶ Spence posits higher education as a costly signal—“good” prospective employees pursue costly education, among other things, to signal their type in the job market and distinguish themselves from “bad” employees.⁴⁷ This strategy can be successful as education is assumed to be more onerous for the “bad” types.⁴⁸ Hence, potential candidates in the job market may pursue higher education even if it does not improve their skills and has no inherent value (i.e., education is useful solely for its signaling quality).⁴⁹ Other economists have employed the concept of signaling in

text.

44. E.g., Robert B. Ahdieh, *The Strategy of Boilerplate*, 104 MICH. L. REV. 1033, 1041 (2006) (“Signaling involves the communication of information that cannot be effectively communicated through explicit statements of intention or character.”).

45. E.g., Michael Spence, *Job Market Signaling*, 87 Q. J. ECON. 355, 361 (1973) (discussing signaling and assuming two “groups” of job applicants, more and less productive).

46. E.g., Eric E. Johnson, *The Economics and Sociality of Sharing Intellectual Property Rights*, 94 B.U. L. REV. 1935, 1986 (2014) (“The theory of marketplace signals was principally developed [i]n a seminal paper [by Nobel Prize winning Michael Spence, who] showed how post-secondary education could be understood as a kind of economic signal, sent by job seekers to employers.”).

47. Spence, *supra* note 45, at 358 (“Individuals . . . are assumed to select signals [such as education] so as to maximize the difference between offered wages and signaling costs.”); *See also supra* note 46.

48. Spence, *supra* note 45, at 358 (discussing the “Critical Assumption” for the signal to “effectively distinguish one applicant from another,” namely, that “the costs of signaling are negatively correlated with productive capability.”). *See also* Michal Barzuza, *Noise Adopters in Corporate Governance*, 2013 COLUM. BUS. L. REV. 627, 644 (2013) (“Spence’s framework suggests that, with asymmetric information, ‘good’ types may signal that they are good by undertaking costly actions that are more costly for ‘bad’ types”).

49. *See* Spence, *supra* note 45.

the contexts of advertising and paying dividends, costly practices that can convey the quality of firms' products and their financial strength.⁵⁰ The concept of signaling has also been developed by scholars from other disciplines. One famous example is the use of signaling in evolutionary biology, where animals indicate their quality through the adoption of seemingly costly traits—the “handicap principle.”⁵¹ To illustrate, by sporting a flashy tail the peacock can signal to potential mates unobservable genetic qualities, “prov[ing] his strength and agility by carrying a heavy load.”⁵² Another well-known example is conspicuous consumption of luxury goods, which signal one's social status.⁵³ Legal scholars have similarly employed signaling to analyze various settings.⁵⁴

B. Litigation Strategies as Signals

A similar logic applies to litigation settings that suffer from asymmetric information problems. Consider areas such as medical malpractice or employment discrimination, in which defendants are typically informed as to the merits of the case whereas plaintiffs are not.⁵⁵ For the same reasons that “good” employees are willing to invest in costly signals, we should expect “good” defendants—those whose actual liability is likely to be small—to strive to signal their merits to uninformed plaintiffs. By doing so, “good” or “strong” defendants can distinguish themselves from “bad,” “weak” ones and achieve a better settlement. Indeed, “good” defendants can indicate their merits by simply proposing low settlement offers.⁵⁶ Low offers are more likely to be rejected by plaintiffs; hence these defendants assume a greater risk of a costly trial. However, the costs to “bad” defendants from going to trial are higher, and may be much higher.⁵⁷ By merely proposing lower

50. See, respectively, Paul Milgrom & John Roberts, *Price and Advertising Signals of Product Quality*, 94 J. POL. ECON. 796 (1986); B. Douglas Bernheim & Lee S. Redding, *Optimal Money Burning: Theory and Application to Corporate Dividends*, 10 J. ECON. & MGMT. STRATEGY 463, 482 (2001).

51. AMOTZ ZAHAVI & AVISHAG ZAHAVI, *THE HANDICAP PRINCIPLE: A MISSING PIECE OF DARWIN'S PUZZLE* (1999).

52. *Id.* at xiv.

53. E.g., Laurie Simon Bagwell & B. Douglas Bernheim, *Veblen Effects in a Theory of Conspicuous Consumption*, 86 AM. ECON. REV. 349, 349–50 (1996).

54. See, e.g., Daniel A. Farber, *Rights as Signals*, 31 J. LEGAL STUD. 83, 85 (2002) (explaining the wave of constitutionalism in developing countries as a signaling device); Eric A. Posner, *Symbols, Signals, and Social Norms in Politics and the Law*, 27 J. LEGAL STUD. 765, 766–77 (1998) (hypothesizing that social norms can serve as a signal that distinguishes between cooperators and non-cooperators).

55. See *supra* notes 33–34 and accompanying text.

56. Reinganum & Wilde, *supra* note 24. We discuss this benchmark signaling technique in *infra* Part III.A.I.

57. See generally *id.*; Daughety & Reinganum, *supra* note 24, at 88–89.

settlements, then, defendants signal that they are more confident of their merits.

Low settlement offers are, however, a very basic signaling technique. We argue that mindful parties can employ a wide array of richer and more complex signaling devices. Moreover, these signaling techniques can be far more effective than merely offering a low settlement. We demonstrate this point by discussing three litigation strategies that have a signaling function: one-way fee-shifting provisions, waiving defenses, and award-modification agreements.

1. Voluntary One-way Fee-shifting

The American rule holds that each party bears its legal expenses.⁵⁸ But parties can generally stipulate as to this rule.⁵⁹ Consider the following message from an informed defendant to uninformed plaintiff:

Hypothetical I—One-way Fee Shifting. “I offer to pay your legal expenses should you take me to trial and win. In the event that you take me to trial and I win, you are exempt from reimbursing me for my legal expenses. I am willing to do so because I am confident that I am going to win, and to help convince you of this.”

Voluntary one-way fee-shifting provisions are not uncommon, at least in pre-dispute agreements.⁶⁰ A study that examined commercial contracts found such asymmetric fee-shifting clauses in approximately 17% of the contracts.⁶¹ These provisions are puzzling. Why would litigants voluntarily offer to pay their rival’s expenses in case of a loss, without insisting on the rival’s obligation to pay their expenses should they win?⁶² The literature has extensively analyzed the reasons behind *mandatory* one-way fee-shifting rules,⁶³ but it has neglected the

58. See, e.g., Theodore Eisenberg & Geoffrey P. Miller, *The English Versus the American Rule on Attorney Fees: An Empirical Study of Public Company Contracts*, 98 CORNELL L. REV. 327, 327 (2013).

59. *Id.*

60. In addition to pre- and post-dispute stipulations, parties can modify the existing fee-shifting rules in various other ways to achieve a similar result. Rule 68, for instance, essentially allows parties to reject an offer and pay the rival’s costs if “the judgment that the offeree finally obtains is not more favorable than the unaccepted offer.” FED. R. CIV. P. 68(d). Therefore, a party who rejects a Rule 68 offer essentially agrees to pay its rival’s expenses contingent on unfavorable outcome at trial.

61. Eisenberg & Miller, *supra* note 58, at 352. But see John J. Donohue III, *Opting for the British Rule, or If Posner and Shavell Can’t Remember the Coase Theorem, Who Will?*, 104 HARV. L. REV. 1093, 1110 n.38 (1991) (during the course of litigation there seem to be few, if any, fee-shifting stipulations).

62. Cf. Harold J. Krent, *Explaining One-Way Fee Shifting*, 79 VA. L. REV. 2039, 2043 (1993) (“[N]o companies willingly agree to one-way fee shifting provisions against themselves.”).

63. E.g., Thomas D. Rowe, Jr., *The Legal Theory of Attorney Fee Shifting: A Critical*

common, voluntary adoption of these clauses.⁶⁴ This oversight is unfortunate.

One-way fee-shifting stipulations typically appear in pre-dispute contracts, a setting admittedly distinct from the realm of litigation strategies that this Article discusses. Nonetheless, the idea of one-sided commitments, contingent on the outcome at trial, illustrates and implements the concept of signaling. Intuitively, one-way fee-shifting provisions can serve as a signal, attesting the strength of the defendant's claims. Consider a medical malpractice case. If the defendant were a negligent doctor, the argument goes, she would not be willing to offer to pay her opponent's legal expenses should she lose. By contrast, a strong, non-negligent doctor can more easily assume that risk—because she knows that she is likely to prevail. Hence, the doctor's promise to reimburse the plaintiff in case the latter wins indicates the strength of the doctor's claims. Strikingly, in actuality, voluntary one-way fee-shifting provisions are highly common in situations that typically suffer from asymmetric information—such as loan agreements—where the provision works against the informed party.⁶⁵

2. *Waiving Defenses and Claims*

A similar logic applies to acts in which one of the parties waives an advantageous defense or a claim. Consider the following example, based on an actual case:

Hypothetical II—Dropping Claims and Waiving Defenses. A renowned law professor is sued for defamation in a French court, following an unflattering book review published by the journal she edits. The case has no contacts to France and the professor holds a strong, preliminary jurisdiction defense. Nonetheless, she asks the court to waive the jurisdictional defense and move to the merits.

This strategy nicely fits the concept of signaling. A defendant with a weak case on the merits would hesitate to waive her substantial preliminary defense. But a defendant whose merits are strong would forego the preliminary jurisdiction claim with more confidence. Hence,

Overview, 1982 DUKE L.J. 651, 653, 670 (1982) (presenting various rationales such as fairness and the desire to incentivize lawsuits).

64. We found only brief discussions on the adoption of voluntary one-way fee-shifting. See Eisenberg & Miller, *supra* note 58, at 370–72 (“in [certain] type[s] of cases . . . imposing the full cost of the harm—including the costs of the other party’s defense in litigation—on the responsible party makes sense.”); Krent, *supra* note 62, at 2043, n.25 (“corporations could agree to such provisions as a type of good faith bond, signaling that they intend to honor contractual . . . responsibilities . . .”).

65. In these situations, one-way fee-shifting provisions can be found in the majority of contracts. Eisenberg & Miller, *supra* note 58, at 356–57.

to the extent that the defendant is privately informed regarding the merits, her move conveys information about her strength (on the merits).⁶⁶

Hypothetical II can be generalized to any case where parties possessing private information on a particular issue have otherwise similar claims or defenses. Consider preliminary defenses in areas such as medical malpractice and employment discrimination, which, as pointed out, suffer from asymmetric information about the merits. However, with regard to the preliminary defenses that the defendant might raise—e.g., statute of limitations—neither party has an informational advantage. Hence, the preliminary defense, the value of which is roughly known to both sides, can be used to indicate the value of each defendant's merits. There seem to be many opportunities for signaling along these lines.⁶⁷

3. Award-modification Agreements

In many actual contracts the parties agree, in advance, to set the future award of damages at pre-determined levels.⁶⁸ These partial settlements can be referred to as award-modification agreements.⁶⁹ Award-modification agreements can be a vehicle to credibly signal information. Consider the following description of an actual agreement:

[I]f the defendant were found by the jury to be not at fault, or less than 50% at fault, the plaintiff would recover \$6,000 . . . if the defendant were found to be over 51% at fault, [the plaintiff] would recover \$22,500.⁷⁰

66. This example is inspired by an actual case in which Joseph Weiler, a professor at New York University and the Editor-in-Chief of the European Journal of International Law was sued in defamation in a French court. The reason was an unflattering book review that Weiler's journal published. The reviewer was a German professor, and the author of the book was an Israeli academic. On its face, the case was unrelated to France and Weiler held a strong, preliminary jurisdiction defense. Nonetheless, he "specifically asked the Court not to examine [the] jurisdictional challenge as a preliminary matter," and proceeded to win the case on the merits. While we use this example to demonstrate signaling the story is more complicated; apparently, Weiler requested to move to the merits in order "to challenge this hugely dangerous attack on academic freedom." Joseph Weiler, *In the Dock, In Paris*. EJIL: TALK! (Jan. 25, 2011), <http://www.ejiltalk.org/in-the-dock-in-paris/>.

67. Another example, discussed in the Introduction, is dropping the right to litigate in a federal forum. For several other concrete examples of signaling through waiving procedural rights see *infra* note 85.

68. Prescott & Spier, *supra* note 13, at 63.

69. *Id.*, at 85–86.

70. Verdict and Settlement Summary, *Clemente v. Duran*, No. L-003405-04, 2006 WL 4643243 (N.J. Super. Ct. Law Div. Dec. 18, 2006). This agreement also held that "if the defendant were found to be 50% at fault, the plaintiff would recover \$11,250." *Id.* For a discussion of this case see Prescott & Spier, *supra* note 13, at 92.

At first blush, this is a standard agreement that limits the possible award of damages (also known as “high-low agreement”⁷¹). A closer look suggests that this arrangement may be less trivial, as it appears to magnify the liability of defendants who are found to be over 51% at fault, relative to less-negligent defendants.⁷² Yet, this agreement is a potential signaling device. A defendant who is confident regarding her case would be willing to augment the award at trial; by contrast, a defendant with a weak case would hesitate to do so.

A similar effect can be achieved through other award-modification agreements. Take a partial settlement in which the parties stipulate damages and the case is tried on liability only—a common practice.⁷³ A defendant who stipulates to generous damages asserts, in essence, that she is not likely to lose on the merits.

Another example along these lines is taken from lawsuits against multiple defendants—the so-called Mary Carter agreements.⁷⁴ As part of these agreements, one defendant settles by guaranteeing a minimum recovery to the plaintiff, but any amount the plaintiff later recovers against the non-settling defendants is credited to the settling defendant.⁷⁵ In essence, the settling defendant agrees to pay the plaintiff conditional on the outcome of the other trials.⁷⁶

Why should the settling defendant concede liability early on, and risk paying a considerable amount if the plaintiff loses the case against the others?⁷⁷ Signaling provides a possible explanation—the settling defendant indicates that she is less liable relative to the other defendants,

71. Under high-low agreements, “a plaintiff agrees to a cap (the ‘high’) on potential damages in exchange for a guaranteed minimum (the ‘low’).” Prescott & Spier, *supra* note 13, at 63.

72. To illustrate, suppose that less-negligent defendants are on average 25% at fault; and that more-negligent defendants are on average 75% at fault. In that case, given that less-negligent defendants pay \$6,000, we should presumably expect the more-negligent defendants to pay thrice as much—\$18,000. However, the parties stipulated that the more-negligent defendants will pay \$22,500.

73. For a comprehensive discussion of similar award-modification agreements, the growing use thereof, and actual examples see Prescott & Spier, *supra* note 13, at 85–94, 110–12.

74. The term “Mary Carter” agreements is a reference to a settlement used in *Booth v. Mary Carter Paint Co.*, 202 So. 2d 8 (Fla. Dist. Ct. App. 1967). See also Lisa Bernstein & Daniel Klerman, *An Economic Analysis of Mary Carter Settlement Agreements*, 83 GEO. L.J. 2215, 2215 (1995).

75. *Id.*, at 2215–16.

76. *E.g.*, RESTATEMENT (THIRD) OF TORTS: APPORTIONMENT LIAB. § 24 cmt. i (2000) (“[T]he more that is recovered by the plaintiff from the nonsettling tortfeasors, the less that the settling tortfeasor is required to pay.”).

77. *E.g.*, G. Michael Bourgeois, *There’s Something About Mary*, 86 A.B.A. J. 60, 60 (2000) (“[F]or the defendants’ lawyers, entering into a Mary Carter settlement can be risky.”).

and she backs this assertion through a seemingly unreasonable monetary commitment.⁷⁸ Similarly to other award-modification agreements, Mary Carter agreements are well-known in practice and seem to be increasingly popular.⁷⁹

Award-modification agreements can be triggered by various reasons. The literature has shown that parties can enter high-low agreements in order to remove the issue of damages from the jury and save litigation expenses.⁸⁰ Others argue that Mary Carter agreements constitute a transaction between an uninformed plaintiff and one defendant, in which the latter provides the former with necessary information to incriminate the remaining defendants.⁸¹ While we do not challenge these explanations, we believe that the desire to signal private information provides another motivation for the use of award-modification agreements, particularly where the defendant agrees to set the plaintiff's award at a generous level.⁸² The signaling perspective can thus enrich the academic and practical discourse regarding award-modification agreements.

* * *

This Part has shown that common litigation strategies—fee-shifting provisions, waiving claims and defenses, and award-modification agreements—can serve as signaling techniques. This list is by no means exhaustive. One can imagine other litigation practices that convey

78. *Cf.*, Bernstein & Klerman, *supra* note 74, at 2227 n.35 (alluding to the signaling function of Mary Carter agreements).

79. *See id.* at 2215 & n.2.

80. For a general discussion on the desirability of partial settlements of this type see Prescott & Spier, *supra* note 13. Prescott and Spier do not discuss asymmetric information—they assume that parties have complete information but they diverge on their expectations regarding their odds of success at trial. *Id.*, at 75–80. *Cf.*, *supra* note 39 (comparing divergent expectations to asymmetric information models).

81. *See generally* Bernstein & Klerman, *supra* note 74. One wonders whether such a transaction cannot be consummated through a simpler deal. For a brief discussion see *id.*, at 2225–28.

82. To illustrate with regard to a liability-only agreements consider Verdict and Settlement Summary, *Dottoli v. McDonnell's Bar & Grill*, No. CamL-6900-03, 2007 WL 8026005 (N.J. Super. Ct. Law Div. Feb. 2007). The defendant, a tavern owner, agreed to litigate liability and set damages at \$140,000, where the plaintiff, a patron of the tavern, contended that he suffered a severe sprain ankle as a result of walking the stairway. The stipulated damages seem to be high relative to the injury. However, a non-negligent defendant could agree to set damages at an excessive level in order to indicate its strength. Indeed, the jury in this case found that the defendant was not negligent. Importantly, this case appears to implicate asymmetric information. The main issue at trial was whether the staircase was in compliance with the relevant regulation—information that typically resides with the defendant.

private information. In light of the growing interest in signaling among legal scholars, on the one hand, and the ongoing debates over asymmetric information in litigation settings on the other hand, it is surprising that the literature has scarcely discussed the power of litigants to signal their merits. The disregard for this issue is particularly astonishing as it encompasses two major bodies of literature—sophisticated game-theoretical analysis of settlements and policy-oriented legal scholarship.

Several game-theoretical articles have identified distinct litigation features that signal information—examples include filing for costly injunctions, investing in observable pretrial preparation, and utilizing intermediaries such as attorneys and litigation funders.⁸³ As it focuses on concrete signaling “technologies” this body of literature underestimates the power of litigants to overcome asymmetric information problems through signaling.⁸⁴ Moreover, the game-theoretical literature is typically oblivious to the legal background and concomitant policy implications. Several legal scholars mention the ability of litigating parties to signal information; however, these discussions are often cursory.⁸⁵ Furthermore, like the game-theoretical literature, these

83. See Thomas D. Jeitschko & Byung-Cheol Kim, *Signaling, Learning, and Screening Prior to Trial: Informational Implications of Preliminary Injunctions*, 29 J.L. ECON. & ORG. 1085 (2012) (conveying information through filing injunctions); Philippe Choné & Laurent Linnemer, *Optimal Litigation Strategies with Observable Case Preparation*, 70 GAMES & ECON. BEHAV. 271 (2010) (same, through investment in observable pretrial preparation); Shmuel Leshem, *Contingent Fees, Signaling and Settlement Authority*, 5 REV. L. & ECON. 435 (2009) (the signaling effect of delegating control to attorneys); Ronen Avraham & Abraham Wickelgren, *Third-Party Litigation Funding—A Signaling Model*, 63 DEPAUL L. REV. 233 (2014) (signaling through third party financing). More generally, as explained above, *supra* note 56 and accompanying text, low settlement offers also constitute a basic signal.

84. A recent exception is the following working paper, William H.J. Hubbard, *Costly Signaling, Pleading, and Settlement* (U. of Chi. Coase-Sandor Inst. for L. & Econ. Res. Paper No. 805, Feb. 1 2017), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2947302. This paper provides a theoretical account of the ability of informed plaintiffs to signal through costly mechanisms, where this group include various mechanisms such as elaborate pleadings and filing fees.

85. See, e.g., Bone, *Frivolous Suits*, *supra* note 26, at 573–76 (suggesting that plaintiffs can commit to pay a bond if their case turns out to be frivolous, deterring at least some frivolous plaintiffs); Rhee, *supra* note 5 (proposing that parties would “elect to shift [their] fees to the loser upon prevailing, so long as the party’s good faith belief in the merit of the case is bonded by the assumption of a higher standard of proof,” and suggesting that such “election may serve an important signaling function.” *Id.*, at 518, 551; Hubbard, *supra* note 34, at 698 (arguing that “plaintiffs with strong claims need a way to credibly signal the strength of their cases [and] [c]ivil procedure itself provides just such a mechanism: pleading!”). *Cf.*, Daphna Kapeliuk & Alon Klement, *Contracting Around Twombly*, 60 DEPAUL L. REV. 1, 20–22 (2010) (arguing that contracting firms can agree on certain pleading standards in order to signal information); Daniel J. Seidmann & Alex Stein, *The Right to*

discussions only highlight concrete signaling mechanisms without providing a general theory thereof. As a result, this body of literature misses the wide breadth of litigation signals and the intricate ways in which they operate.

Our approach is different. We consolidate the sporadic examples into a general framework, constructing a systematic typology of litigation signals. Our comprehensive theoretical account yields a more precise understanding of this subject—and, as a result, more concrete legal implications.

III. TAXONOMY AND ANALYSIS OF LITIGATION SIGNALS

This Part takes a closer look into the mechanics of litigation signals, relying on a game-theoretical analysis.⁸⁶ After presenting our insights, this Part discusses the limitations of our approach as well as actual implementation in real-world situations.⁸⁷

A. A Model of Litigation Signals

We first discuss a benchmark situation, in which no particular signal apart from the offer itself is utilized and then proceed to other classes of signals—unilateral, third-party and cooperative.

1. Benchmark Analysis

The starting point is an asymmetric information setting where defendants are privately informed. There are many representative situations;⁸⁸ for expositional purposes, we will employ a medical malpractice setting. We will refer to the defendants/doctors as females and the plaintiffs as males. The following analysis presumes two possible types of doctors—“careless” and “careful” doctors. While the court is not immune from mistakes, on average careless doctors can expect to pay larger sums following a trial than careful doctors. We can think, for example, that a failed operation results in damages of 150, and the only question is whether the doctor was negligent or not. The careless doctor predicts, for instance, that there is a 66.67% probability that the

Silence Helps the Innocent: A Game Theoretic Analysis of the Fifth Amendment Privilege, 114 HARV. L. REV. 430 (2000) (discussing the signaling value of the right to remain silent in criminal proceedings).

86. Cf. Bone, *Frivolous Suits*, *supra* note 26, at 525–27 (discussing the advantages of game-theoretical analysis of pre-trial bargaining in legal scholarship).

87. This Article only discusses signaling between the parties to the litigation. We note that similar signals can be aimed at the judge, but such potential signals are beyond the scope of the current discussion.

88. See *supra* notes 32–37 (discussing typical situations).

court will find that she was negligent and rule against her, so that her expected liability is 100 ($= 150 * \frac{2}{3}$). Similarly, the careful doctor assesses that there is a 40% probability of a judgment against her, hence her expected liability is 60 ($= 150 * 0.4$). Following the common description of asymmetric information, we assume that before trial the plaintiff cannot distinguish between careful and careless doctors, although he can assess their distribution in the population. For the sake of example, we will assume that the plaintiff knows that the odds that he faces a careful, rather than a careless doctor are 50%.

We assume the following bargaining procedure. First, the plaintiff brings a lawsuit against the doctor. Then, the doctor can make a single settlement offer to the plaintiff. If the plaintiff accepts the offer the case is settled; otherwise, it goes to trial. If there is a trial, each party incurs his or her litigation expenses. For simplicity, we will assume that litigation costs amount to 25 for each party, defendants and plaintiffs alike. The single offer assumption is of course a simplifying description, as in actuality there may be counteroffers and revisions of the original settlement, and this process can affect the behavior of litigants. However, the single offer assumption is a standard tool that essentially conceptualizes a bargaining process in which one of the parties—in this example the proposing defendant—has superior bargaining power.⁸⁹

With no private information, we would expect the careless physician to make a settlement offer equal to her expected liability at trial minus the plaintiff's litigation costs, or, 75 ($= 100 - 25$) under the foregoing numerical example. The plaintiff should accept this offer with certainty, as he would gain nothing from rejecting it—this amount, 75, exactly reflects the payoff that the plaintiff receives by going to trial against the careless doctor. As a settlement offer of 75 will be accepted, there is no reason for the careless defendant to offer more than that sum. For similar reasons, the careful defendant has no reason to offer more

89. Moreover, below we indicate contexts in which our analysis seems sensitive to the single-offer assumption. See *infra* note 114. For a more elaborate, general discussion on the single-offer assumption see Daughety & Reinganum, *supra* note 24, at 85, who explain why despite being “a highly stylized story . . . [t]he vast majority of the papers in the settlement literature have employed this canonical form of modeling.” While more sophisticated models have allowed for multiple rounds of negotiation, the main insights of the simple, single-offer model persist. See *id.*, at 89–90; Bone, *Frivolous Suits*, *supra* note 26, at 570–71. As a side note, it seems plausible to assume that those who have private information in the foregoing examples, *i.e.*, doctors and employers, also hold superior bargaining capacities. Cf. Hylton & Lin, *supra* note 39, at 500 (claiming that models in which the informed party makes the offer better approximate pre-trial bargaining); Robert G. Bone, *Party Rulemaking: Making Procedural Rules Through Party Choice*, 90 TEX. L. REV. 1329, 1361 (2012) [hereinafter Bone, *Party Rulemaking*] (“[M]any features of the employment relationship are imposed on a take-it-or-leave-it basis.”).

than her expected liability minus the plaintiff's litigation costs, or, 35 (= 60 – 25) in our example. With no informational asymmetries, then, all cases should settle.

However, due to asymmetric information problems the plaintiff *cannot* distinguish, before trial, between careful and careless defendants. The careless defendants may attempt to bluff, claim that they are careful defendants and make a low settlement offer of 35. Hence, the plaintiff cannot trust low settlement offers and must reject at least some of them, leading to costly trials.

This dynamic eventually leads the careless doctors to reveal their type, i.e., to make a high settlement offer, 75 in our example. The plaintiffs always accept these high offers.⁹⁰ Careful doctors make a low settlement offer of 35, but the plaintiff is bound to take them to trial sometimes.⁹¹

The intuition for this result is as follows. If the careless doctor attempts to present herself as careful by offering a low settlement, 35, she risks going to trial as the plaintiff rejects some low offers. If brought to trial, she can expect to pay both her legal expenses and, with some probability, the plaintiff's damages. In a state of equilibrium the careless defendant does not find it profitable to bluff. Accordingly, the rate at which the plaintiff rejects low offers of 35 can be derived mathematically—the frequency of rejection should be sufficiently high to guarantee that the careless defendant does not gain from mimicking the careful one. In the foregoing numerical example, the plaintiff can be expected to accept ~55% of the low offers he receives.⁹²

Note that for the careful doctor trials are less costly, as her expected liability is smaller than that of the careless doctor. Hence, although the plaintiff rejects many low offers the strong defendant still proposes a low settlement offer. As we found that high offers are definitely accepted and low offers are accepted ~55% of the time, we can now predict the

90. The uninformed plaintiff cannot achieve a better result at trial—at best, he faces a careless doctor, and in that case he expects to gain 75 (net of litigation expenses). Hence, the highest offers, of 75, should be accepted with certainty. *Cf.*, Spier, *supra* note 22, at 275–76 & n. 26.

91. This is a classic result. For a similar result in a more complicated setting see Reinganum & Wilde, *supra* note 24.

92. If the careless doctor reveals her type she expects to pay 75 (her settlement offer would be accepted with certainty). If she mimics a careful doctor and offers 35, her payoff depends on the rate at which the plaintiff takes her to trial—if the plaintiff accepts, she pays 35; if the plaintiff rejects, she expects to pay 125 (her expected liability plus her litigation expenses). Suppose that the plaintiff accepts y low offers of 35—in that case, y can be calculated such that the careless doctor is just indifferent between mimicking and revealing her type: $75 = 35 * y + (1 - y) * 125$, hence $y = 0.55$.

general rate of litigation in this example, ~22%.⁹³ These cases fail to settle due to asymmetric information problems, i.e., the inability of plaintiffs to distinguish between strong and weak defendants before trial.⁹⁴

We can also predict that the greater the litigation costs, the higher the settlement rate; intuitively, when trial is more costly parties will have more incentive to avoid it.⁹⁵ Likewise, the larger the gap between strong and weak defendants, the lower the settlement rate. Where that gap is larger, weak defendants profit more from masking as strong ones and the asymmetric information problems are aggravated.⁹⁶ These general results are standard in the literature.⁹⁷

This benchmark analysis describes a simple signaling mechanism—the strong defendant signals her strength by offering a low settlement, where the risk of rejection and trial is more onerous for the weak defendants. Beyond the theoretical account, a similar signaling seems to exist in real-world settings. Although they are not explicit about the use of signaling, attorneys are often guided to convey that they are tough negotiators—e.g., to pose “seemingly excessive opening demands or apparently parsimonious offers” in order to “induce . . . adversaries to reconsider their own preliminary assessments.”⁹⁸

The foregoing presents a basic, even primitive signal, which only uses the amount offered. There is a reason to believe that informed defendants can use mechanisms other than the offer itself to signal their strength more effectively. We classify these more sophisticated litigation signals in three broad groups (i) unilateral signals; (ii) third party signals, (iii) cooperative signals.

93. As the careless doctor always settles, the careful doctor settles with a 55% probability, and half of the doctors are careful, the rate of litigation is $(1 - 0.55) * 0.5 = 0.22$.

94. Cf., Daughety & Reinganum, *supra* note 24, at 88 (explaining that the uninformed party has to take some cases to trial in order to prevent mimicry by the informed parties who have a weaker case).

95. Simply, “increased court costs minimize the threat of going to court.” Andrew F. Daughety, *Settlement*, in 5 ENCYCLOPEDIA OF LAW AND ECONOMICS 95, 134 (Boudewijn & Gerrit De Geest eds., 2000)

96. Intuitively, a larger gap “increases the incentive for [informed parties with weaker case] to claim to be [informed parties with stronger case], thereby requiring more diligence on the part of [the uninformed, who] accomplishes this by increasing [the rate at which she refuses to settle].” *Id.*, at 133–34.

97. E.g., Reinganum and Wilde, *supra* note 24.

98. See Russell Korobkin, *Aspirations and Settlement*, 88 CORNELL L. REV. 1, 27–28 (2002) (quoting CHARLES B. CRAVER, EFFECTIVE LEGAL NEGOTIATION AND SETTLEMENT 172 (2d ed. 1993)). See also Gertner & Miller, *supra* note 27, at 90 (“[A]ttorneys report that they often resist being the first to propose a settlement out of fear of signaling weakness”).

2. Unilateral Litigation Signals

Unilateral signals are one-sided commitments that benefit the rival party if the case proceeds to trial. Litigants with strong cases will be more willing than litigants with weak cases to make such commitments, as the former are harmed to a lesser extent by doing so.

We will illustrate this group of signals through unilateral promises to “double down,” i.e., augment the award at trial conditional on losing. Consider the following hypothetical message that accompanies a settlement offer made by an informed defendant to an uninformed plaintiff:

Hypothetical III—Multiplier Provision. “As a defendant, the private information that is available to me tells that I am not likely to be found liable at trial. To help convince you of this, I promise to pay you twice your judgment should you reject this settlement offer, go to trial, and win.”

Intuitively, this provision can be an effective signal as it harms weak defendants to a greater extent than strong ones. The strong defendants are less likely to lose at trial; hence, compared to weak defendants, strong ones can more readily promise to augment their liability in the event of losing. Put differently, this message indicates that the promisor is confident with regard to its merits. It relies on the fact that trials convey at least some information—hence a payment conditional on the judgment can serve as an effective signal. As noted earlier, the logic that Hypothetical III expresses has garnered scarce attention from legal scholars.⁹⁹

Moreover, while Hypothetical III employs a multiplier of two on the judgment, it in fact generalizes several other litigation strategies. Previously, we noted that voluntary one-way fee-shifting provisions can serve as litigation signals.¹⁰⁰ Assuming that litigation costs are in the range of a third of the judgment,¹⁰¹ these provisions resemble a unilateral

99. See *supra* notes 83–85 and accompanying text. Related to our point are a few papers that use a mechanism design approach to show that settlements can be encouraged if a post-judgment transfer is conditioned on the outcome at trial. Kathryn E. Spier, *Pretrial Bargaining and the Design of Fee-Shifting Rules*, 25 RAND J. ECON. 197 (1994); Alon Klement & Zvika Neeman, *Against Compromise: A Mechanism Design Approach*, 21 J.L. ECON. & ORG. 285 (2005); James D. Miller, *Using Lotteries to Expand the Range of Litigation Settlements*, 26 J. LEGAL STUD. 69 (1997). The mechanism design approach employs a more abstract framework that disregards specific bargaining protocols to study the highest possible settlement rate under different constraints. While this Article is in line with this literature, our analysis provides the specific contractual and legal tools that implement the desired results and demonstrates the contractual and legal tools that are non-workable.

100. See *supra* Part II.B.1.

101. E.g., Herbert M. Kritzer, *The Wages of Risk: The Returns of Contingency Fee Legal*

multiplier of ~ 1.3 on the judgment, to be paid in the event that the promisor loses. The signaling function fulfilled by waiver of claims or defenses,¹⁰² can also be expressed as an implicit multiplier on the judgment.¹⁰³ A multiplier can similarly reflect an award-modification agreement in which the defendant stipulates, in advance, to inflated damages.¹⁰⁴ Hypothetical III, then, captures a wide range of litigation tactics that are, in fact, unilateral signals. Common to all these strategies is a unilateral commitment by the informed defendant that has the potential to benefit the plaintiff if settlement fails.

The effectiveness of unilateral signals in conveying information is seemingly straightforward.¹⁰⁵ However, this perception is misleading. A closer analysis reveals that unilateral signals are, in fact, highly unlikely. The intuition is the following. Consider our previous example, where careless and careful doctors expect to pay at trial 100 and 60 respectively, and the plaintiff cannot distinguish between the two before trial. Where the careful doctors offer a multiplier on the judgment the incentives of the careless doctors to “bluff” are reduced, as they are more likely to lose and eventually pay the multiplier. Thus, the rate at which careful doctors are taken to trial is lower. In this regard, a commitment to augment the award at trial improves the situation of careful doctors.¹⁰⁶

But this is only part of the picture. Promising to pay a multiplier in case of a loss at trial is also counterproductive for careful doctors for two reasons. First, careful doctors now expect to pay more at trial if their settlement offer is rejected. Indeed, they expect to pay twice as much if they offer a multiplier of two and the plaintiff rejects their offer. Second, and more importantly, once the careful doctor promises to pay a multiplier, the plaintiff demands a higher settlement offer. We showed

Practice, 47 DEPAUL L. REV. 267, 285 (1998) (“One-third is the ‘standard’ contingency fee figure.”).

102. See *supra* Part II.B.2.

103. To illustrate consider a case in which the expected liability of the defendant on the merits is 100, and she has a preliminary jurisdiction argument that is likely to be accepted with a 20% probability. Hence, with the preliminary defense, the defendant’s expected liability is only 80. By waiving the preliminary defense, the defendant in fact commits to inflate her liability by a factor of $100/80$ —akin to a multiplier of 1.25 on the judgment. Of course, waivers of claims and defenses and multipliers on the judgment are not identical. One difference is that waivers usually save litigation costs, while multipliers may increase them.

104. For actual examples along these lines see *supra* notes 70 and 82 and accompanying text. The multiplier in these examples can be expressed as the ratio between the augmented award that the defendant promised and her expected liability.

105. Indeed, several legal scholars have alluded to the possibility of signaling through unilateral promises. See *supra* note 85.

106. In our benchmark example, careful doctors settled 55% of the time. See *supra* note 92. One can verify that this rate rises to $\sim 81\%$ with a (unilateral) multiplier of 1.3 on the judgment.

previously that if the plaintiff believes that he faces a careful defendant he will agree to settle for 35—if he rejects this offer, he goes to trial and expects to gain the same amount.¹⁰⁷ However, once the careful doctor promises to pay a multiplier, the plaintiff becomes more eager to go to trial and as a result has more leverage during negotiations. To illustrate, with a multiplier of two, if the plaintiff rejects the offer and goes to trial he expects to gain 95.¹⁰⁸ Therefore, the careful doctor who promises to pay a multiplier has to raise her settlement to the plaintiff.

In summary, there are three moving forces in the background. A careful defendant presenting a unilateral signal enjoys a higher settlement rate; but she has to propose a higher settlement offer, and, if the offer is rejected she expects to pay more. This analysis holds for all unilateral signals, including explicit multipliers, award modification agreements, voluntary one-way fee-shifting provisions, and waiver of defenses.¹⁰⁹ Unilateral signals may seem intuitive, but our closer inspection reveals that we cannot expect these signals to be triggered regularly.

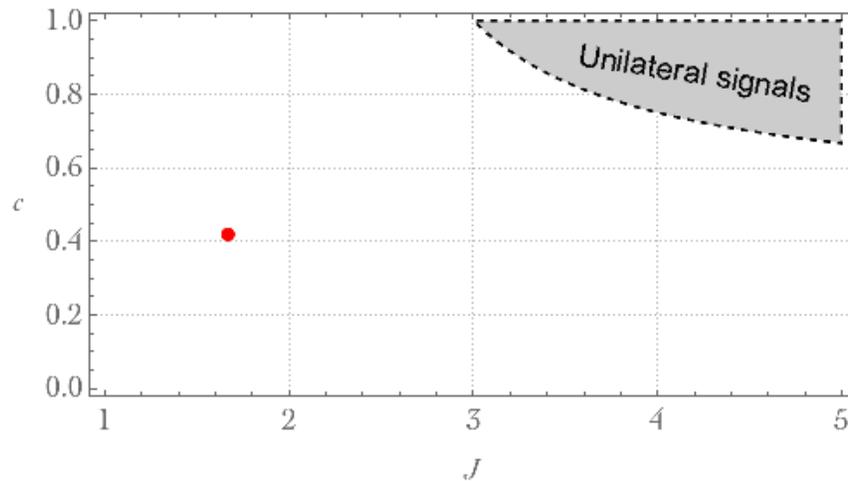
When, then, would we expect the parties to employ unilateral signals? One can demonstrate that due to the foregoing reasons unilateral signals are typically detrimental to strong defendants and hence are rarely used by them. Unilateral signals would only be triggered when the gap between strong and weak defendants is sufficiently wide and the costs of litigation are sufficiently large.¹¹⁰ Figure 1 uses simulations to demonstrate:

107. A plaintiff that goes to trial against a careful defendant expects to gain thirty-five: the careful doctor's expected liability, sixty, minus the plaintiff's litigation costs, twenty-five.

108. In that case the plaintiff expects to gain the careful doctor's expected liability times a multiplier of 2, $60 * 2$, minus his own litigation costs, 25.

109. With a voluntary one-way fee-shifting provision, for example, the informed defendant gains from the higher settlement rate that accompanies the signal; but she pays more if she loses at trial—the plaintiff's litigation expenses; likewise, as a trial is less costly for the plaintiff, he is now more eager to reject the original offer and the defendant must propose a higher settlement. Award modification agreements that augment the defendant's liability should she lose at trial operate similarly. With a waiver of, say, preliminary defense, the careful defendant again better indicates her strength, enjoying a higher settlement rate; but she is more likely to lose, as she waived an important defense; and she made the plaintiff more likely to win, hence the plaintiff demands a higher settlement.

110. Intuitively, a larger gap between strong and weak defendants intensifies the risk of weak doctors mimicking as strong ones, making costly signals more valuable. Similarly, costly litigation stresses the need to find ways to bridge informational gaps.

Figure 1: Unilateral Signals

The horizontal axis measures the gap between strong and weak defendants, where J is the ratio between the weak- and the strong-type's expected liabilities. (Hence, Figure 1 reflects settings in which the weak defendant's expected liability is up to five times the strong defendant's liability). The vertical axis measures the costs of litigation, c , relative to the strong type's expected liability (litigation costs cannot presumably exceed the strong defendant's expected liability). Unilateral signals are possible only in settings that are presented within the upper right corner (the gray area)—apparently, a small slice of the universe of cases.¹¹¹

To further demonstrate how unlikely unilateral signals are, consider the foregoing numerical illustration, where the expected liabilities of careful and careless doctors are 60 and 100, and litigation costs are 25. The numerical example reflects values of $J = 1.67$ ($100/60$) and $c = 0.42$ ($25/60$) and it is represented in Figure 1 through a red dot—farther away from the area in which unilateral signals are possible. More generally, empirical evidence shows that each side's litigation costs are typically lower than half of the expected judgment (i.e., $c < 0.5$),¹¹²

111. To appreciate how unlikely unilateral signals are suppose that the distribution of the ratio of litigation costs relative to the strong type's liability is triangular on $[0, 1]$ with mode zero (and a mean of $1/3$). Suppose further the distribution of the ratio between weak and strong defendants is uniformly distributed on the interval 1 to 5 (mean of 3). Then, the frequency of unilateral signals in the population of asymmetric information cases is less than 3%.

112. As a rough benchmark, contingent fees, which presumably express litigation costs, typically constitute around $1/3$ of the actual judgment, *supra* note 101. Moreover, the total expenses that are associated with litigation—of both parties and the court—are estimated to be, by and large, equal to the judgment, SHAVELL, *supra* note 23. Hence it is unlikely that each party's litigation costs are greater than half of the expected judgment.

suggesting that unilateral signals are rarely viable.

This section elaborated on the class of signals that are employed unilaterally and benefit the rival party, using the multiplier provision example to capture a wide range of litigation strategies. This class of signals indicates the strength of the informed defendant's claims, but it also harms her and improves the plaintiff's position. Hence, in general, these signals will be used in narrow enclaves.

3. *Third-party Litigation Signals*

Litigation signals can be modified to make them less costly for the informed defendant. This goal could be achieved by a commitment that does not benefit the plaintiff, but a third-party. Consider the following hypothetical provision in a settlement offer:

Hypothetical IV—Third Party Multiplier. “My private information tells me that my case is strong. To help convince you of this, if you reject this settlement offer, go to trial, and win, I promise to pay, in addition to the judgment, an equal sum to a charity.”

Hypothetical IV generalizes commitments to spend money on unrelated causes, contingent on losing the case. Third-party signals, in our terminology, can therefore manifest themselves in different other ways, e.g., through a promise by the defendant to “burn” money in case the plaintiff rejects the settlement offer and the defendant loses.¹¹³

Third party signals are more likely to be triggered than unilateral signals. The intuition is the following. As before, the commitment to pay in the event of a loss at trial signals the strength of the strong-defendant's claim. However, third-party signals also harm the strong defendant, who now expects to pay more if she loses the case (through a donation to charity). Take a careful doctor who expects, without any signal, to pay at trial 60 (in addition to her legal expenses); with a third party signal similar to Hypothetical IV, this doctor expects to pay as a result of the trial twice as much, 120, where 60 goes to the plaintiff and 60 to charity. These two contradictory forces are identical to both unilateral and third-party signals.

However, in contrast to unilateral signals, third party signals do not directly benefit the plaintiff—the additional sum is paid, after all, to charity and not to the plaintiff's pocket. Therefore, the defendant need not inflate her settlement offer. Put differently, the plaintiff's appetite for trial remains the same. To illustrate, consider a careful doctor who

113. Cf. David Austen-Smith & Jeffrey S. Banks, *Cheap Talk and Burned Money*, 91 J. ECON. THEORY 1 (2000) (discussing how informed parties can signal information through self-imposed losses, e.g., burning money).

commits to a third-party signal along the lines of Hypothetical IV. If she goes to trial under the third-party provision, this strong defendant expects her augmented payments after trial to be 120 ($= 60 * 2$) (plus her legal expenses). However, a plaintiff who faces this strong defendant should agree to settle for 35 ($= 60 - 25$): this is the plaintiff's gain if he goes to trial under the third-party signal, an amount identical to the benchmark, no-signal case. As a result, third-party signals could be viable in a larger range of circumstances than unilateral signals.¹¹⁴

In summary, self-commitments to third-parties, contingent on losing the case, remove one hurdle for the strong defendants to signal their merits. However, this class of signals still embodies a tradeoff—it enables the strong defendants to better indicate their case and gain more settlements; but the signal is also costly, as it entails the risk of an additional payment where settlement negotiations fail and the defendant loses at trial.

In view of this, when would the parties choose to employ third-party signals? While they reduce the rate of trials, third-party signals are typically too costly to pursue, as they require litigation costs to be sufficiently large. Figure 2 uses simulations to demonstrate the viability of third-party signals:

114. The result that the plaintiff does not gain from third-party signals follows from the assumption that the defendant holds all bargaining power (the single offer assumption). *See supra* note 89 and accompanying text. However, even if the plaintiff holds some bargaining power, he will force the defendant to raise the settlement offer, but this increase would be lower than the concomitant increase in the unilateral signals case (where the plaintiff directly profits from the signal). Hence the general proposition in the text remains true—third-party litigation signals are more likely—even if we relax the bargaining power assumption.

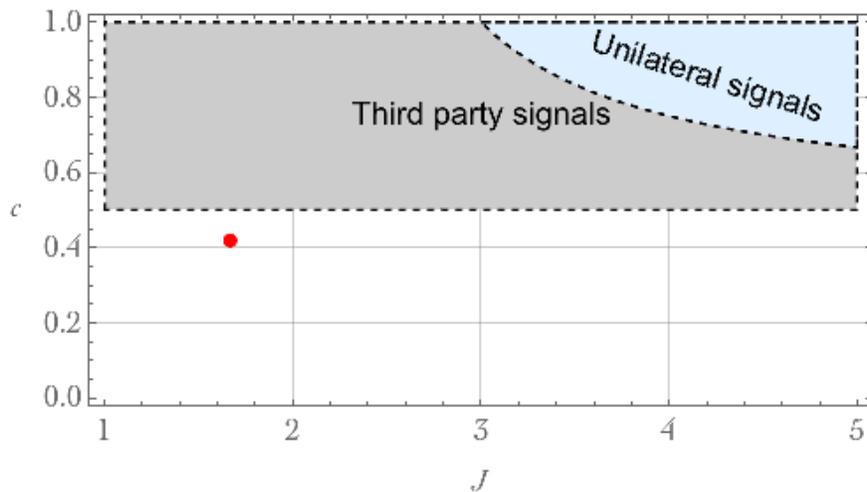
Figure 2: Third Party and Unilateral Signals

Figure 2 replicates Figure 1 and superimposes on it the region where third-party signals are operable. As can be easily seen, compared to unilateral signals, third-party signals are more likely to occur. Yet, our running numerical example, represented by the red point, is outside the operable area implying that third-party signals will not occur. As we noted before, evidence suggests that litigation costs are typically smaller than half of the defendant's liability¹¹⁵—hence in real world situations third party signals seem unlikely as well.¹¹⁶

In sum, third-party signals can be more effective than unilateral signals. However, third-party signals are also unlikely. While unilateral and third-party signals require no cooperation,¹¹⁷ the next section demonstrates that a more sophisticated signaling technique, which requires cooperation, is more effective.

4. Cooperative Litigation Signals

In cooperative signals the strong informed party likewise commits to augment her liability should she lose at trial. Unlike unilateral and

115. See *supra* note 112 and accompanying text.

116. To see how unlikely third-party signals are, we ran simulations in which the distribution of the ratio of litigation costs relative to the strong type's liability is triangular on $[0, 1]$ with mode zero and a mean of $1/3$ (the distribution of the ratio between weak and strong defendants is irrelevant). Then, the frequency of third-party signals in the population of asymmetric information cases is 25%.

117. In this sense, third-party signaling is also unilateral. We chose this terminology in order to stress the distinctions between self-commitments that benefit the rival party ("unilateral signaling") and self-commitments that do not benefit the rival party ("third-party signaling").

third-party signals, the defendant is willing to do so only in exchange for compensation, reflecting the higher risk she bears. Consider the following message from an informed strong defendant to an uninformed plaintiff:

Hypothetical V—Multiplier with Upfront Payment.—“Here is my low settlement offer. You can either (1). Accept it. (2). Reject it and go to trial. (3). Reject the offer and go to trial where, if I lose, I promise to pay you twice your judgment. If you choose option (3) I demand in return an upfront, specified amount.”

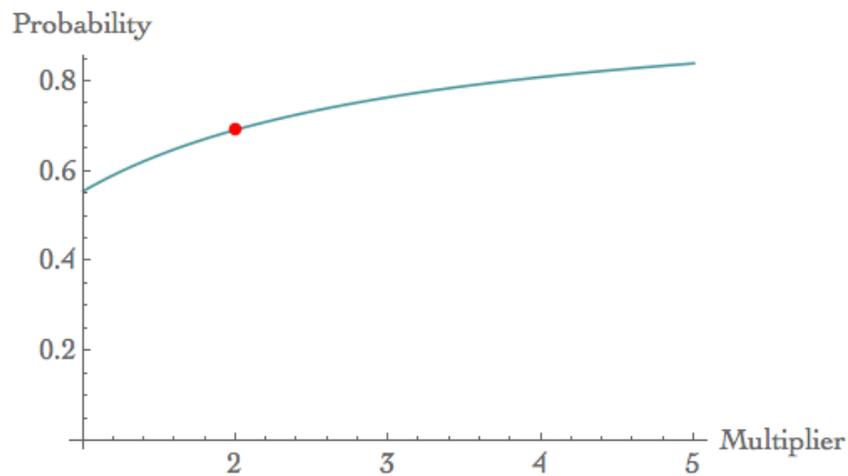
The elegant and powerful feature of cooperative litigation signals is that they are costly to careless doctors who disguise themselves as careful ones, but are costless to careful defendants. A payment from the plaintiff to the informed defendant is essential to achieve this goal—intuitively, in Hypothetical V this payment should fully reimburse careful doctors for the risk of losing at trial and paying twice the judgment.

To illustrate, consider the foregoing numerical example, where the careless and careful doctors' expected liabilities at trial are 100 and 60. Along the lines of Hypothetical V, the careful doctor now offers a multiplier of two on the judgment, conditional on losing the case, but in exchange she demands a payment. This fixed payment should equal the careful doctor's extra expected liability—60. With this cooperative signal provision, the careful doctor expects to pay 120 ($= 60 * 2$) after trial; but she gains 60 as an upfront payment. Hence, overall she expects to pay 60 to the plaintiff, as if she had not committed to a multiplier. The plaintiff, at the same time, is indifferent between going to trial (and expecting a reward of 60) and paying 60 in order to double his expected award. Now consider a careless doctor who presents herself as a careful one, offering the same cooperative signal provision. This bluffing defendant can expect to pay 200 ($= 100 * 2$) at trial; but her gain from the upfront payment is only 60 (because she presents herself as a careful doctor). Hence, a masking defendant who mimics this cooperative signal expects to be penalized at trial and pay, in addition to her litigation expense, 140 ($= 200 - 60$). Importantly, this sum exceeds the bluffing defendant's actual liability, 100. In summary, while strong defendants who offer truthful settlements are not punished by the cooperative signal provision, weak defendants who mask as strong ones and offer the same provision are expected to suffer greater losses. Unlike unilateral and third-party signals, then, strong defendants cannot suffer from employing cooperative signals. Hence, in principle cooperative signals are always feasible.

Figure 3 uses simulations to illustrate how cooperative signals can

reduce the rate of litigation, using the previous numerical example. The horizontal axis is the multiplier promised by the defendant, from 1, the benchmark situation, to 5. The vertical axis measures probability (0 to 1). The graph reflects the rate at which low offers are accepted as a function of the multiplier. The red point represents Hypothetical V, which uses a multiplier of two. As the graph demonstrates the acceptance rate increases from ~56% in the benchmark case, with no multiplier, to ~69% with a multiplier of two:

Figure 3: The Effectiveness of Cooperative Signals



Importantly, Figure 3 shows that even relatively modest multipliers can generate a considerable increase in the rate of settlements.

Finally, we note that the class of cooperative signals can take many forms. Hypothetical V demonstrates a fixed payment made before trial, but this payment can also take place after trial. In a similar vein, the exchange payment can be a fixed sum or conditioned on losing the case.¹¹⁸ In the latter case, a cooperative signal resembles a loser-pays rule, with different post-trial obligations.¹¹⁹ Moreover, cooperative

118. Cf. Prescott & Spier, *supra* note 13, at 96 & n.141 (high-low agreements involve a side payment, the “low,” which is typically paid as a contingent payment after trial, but can in theory be paid as a separate, fixed payment prior to trial though “in practice this does not happen”).

119. To illustrate such a cooperative signal: “Should she lose the case, the defendant agrees to pay x in addition to the judgment against her; in return, the plaintiff agrees to pay to the defendant an amount z in case he loses.” Of course, x and z should be calculated such that this commitment is costless for strong defendants while it is costly for weak defendants. Note that under certain circumstances a simple loser-pays rule will constitute a cooperative

signals need not use explicit multipliers on the judgment and can be executed through other signaling technologies, such as waiving claims, one-way fee-shifting, and award-modification agreements.¹²⁰ More generally, we have thus far described settlement negotiations between a defendant and a plaintiff, but one can think of a third party who facilitates the transaction through a cooperative signal.¹²¹

The following table summarizes our analysis:

	Unilateral Signals*	Third-Party Signals**	Cooperative Signals***
Rival's gain	Yes	No	No
Self-harming	Yes	Yes	No
Cooperation	Not required	Not required	Required
Prediction	Highly unlikely	Unlikely (only where litigation expenses are very high)	Can always be triggered, to the extent parties cooperate

*—Multipliers on the judgment, award-modification agreements, one-way fee-shifting, waiving defenses.

**—Donating to charity conditional on the judgment, burning money upon losing.

***—The unilateral signals examples coupled with a payment from the uninformed to the informed.

B. Litigation Signals in the Wild

Game theoretical analysis attempts to roughly approximate real-world situations. We do not purport to claim that our analysis precisely reflects actual settlement behavior. Like other models, it provides a stylized description of real-world settings.¹²² Presumably, litigants are not perfectly rational decision-makers, and real-life situations are more

litigation signal. Assuming that each side's litigation costs are similar, where the strong defendant's expects to win with a 50% probability, the strong defendant's incurs no additional expenses from a loser-pays rule while the weak defendant, who presumably win with a probability lower than 50%, finds mutual fee-shifting unprofitable.

120. To illustrate, a waiver of defense can be integrated into a cooperative signal provision through the following message from a strong defendant: "I am offering you a low settlement offer. To convince you that I am a strong defendant, if you reject my offer I am willing to waive my preliminary defense in exchange for a fixed payment."

121. Theoretically, a third-party could replace the plaintiff along the lines of Hypothetical V—a strong defendant could commit to pay an extra-amount to a third-party should the plaintiff win; and in exchange the third-party could pay the strong defendant a fixed amount, such that the signal becomes costless for strong defendants but costly for weak ones. *Cf.* Robert Cooter & Ariel Porat, *Anti-Insurance*, 31 J. LEGAL STUD. 203 (2002) (suggesting a contract in which the promisor pays damages to a third-party in exchange for a fixed payment).

122. *E.g.*, Daughety & Reinganum, *supra* note 24, at 85 (explaining why standard litigation models depict "a highly stylized story").

complicated than a given theoretical setting, however complex it is.¹²³ It is plausible to believe, though, that game-theoretical analysis expresses, at least roughly, a wide range of actual settlement negotiations.¹²⁴ Many legal disputes, including those that suffer from asymmetric information problems, are conducted and managed by seemingly rational parties, such as attorneys and insurance firms.¹²⁵ Particularly, the foregoing describes a medical malpractice case, but asymmetric information is prevalent in other areas, such as class actions, which often feature sophisticated, strategic-minded parties on both sides.¹²⁶ Likewise, while we discussed a concrete bargaining setting, our analysis ultimately rests on plausible assumptions. We relaxed some of the underlying assumptions and we found that our general predictions are similar.¹²⁷

123. Cf., Russell Korobkin and Chris Guthrie, *Psychological Barriers to Litigation Settlement: An Experimental Approach*, 93 MICH. L. REV. 107 (1994) (discussing psychological barriers to settlements, against the backdrop of rational decision-making models).

124. Indeed, empirical evidence corroborates at least some of the predictions of mathematical models of litigation. See *supra* note 40. See also Hubbard, *supra* note 34, at 716–17 (discussing the implications of his game-theoretical analysis and acknowledging that litigants “do not always make coolheaded calculations about litigation costs and benefits,” but concluding that, for various reasons, motivations such as “[s]pite, [i]ndignation, and [o]ptimism” “ought not be overstated.” *Id.* at 716).

125. See Hubbard, *supra* note 34, at 716 (“it is usually more realistic to treat the decisionmaker as the plaintiffs’ attorney, who has the expertise, incentive, and emotional detachment to make decisions driven fundamentally by the calculus presented above”).

126. For asymmetric information and class actions see *supra* note 36 and accompanying text.

127. Mostly, these extensions were conducted in a companion, technical paper titled *Judgment Contingent Settlements*, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3000218. First, a more complicated analysis, with an infinite number of different potential defendants with varying degrees of liability provides similar insights. Second, to the extent the parties’ resources are limited, they cannot credibly commit to a generous multiplier, but they still enjoy the benefit of signaling—as even promises to relatively modest multipliers on the judgment generate a considerable reduction in the rate of trials. Third, we assumed in our model that the plaintiff is better off bringing the lawsuit against all defendants. Similar predictions hold in situations in which the uninformed plaintiff has a good case against the weak defendant; but the suit has a negative expected value against the strong defendant. Fourth, we assumed throughout that each side carries its legal expenses; the results are similar under the British rule, in which the loser has to pay the winner’s expenses. Fifth, we accounted for the rising costs of litigation that are associated with inflating the stakes of the case through a multiplier. Our predictions are similar, under the additional assumption that litigation costs are relatively lower the greater the stakes, *i.e.*, that investment in litigation has a decreasing marginal utility. This assumption is consistent with empirical studies. See, e.g., EMERY G. LEE III & THOMAS E. WILLGING, FED. JUDICIAL CTR., LITIGATION COSTS IN CIVIL CASES: MULTIVARIATE ANALYSIS—REPORT TO THE JUDICIAL CONFERENCE ADVISORY COMMITTEE ON CIVIL RULES 5, 7 (2010). Sixth, we can apply a similar analysis to cases in which the plaintiff is informed and the defendant is not. Seventh, the same results hold when the informed party uses a fixed commitment, rather than a multiplier on the judgment; likewise, in cooperative signals the fixed payment can be paid before or after trial, and it can

Against this backdrop, to what extent do parties actually use litigation signals? We do not claim that parties find the way to signal their merits in all asymmetric information cases. By contrast, we believe that litigation signals, especially in the form of monetary commitments conditioned on losing the case, are under-used, and we conclude our Article with a call for lawyers to employ them more frequently. However, we do regularly observe other, more primitive forms of signaling.

1. Explicit Monetary Obligations

Monetary commitments to pay an additional sum contingent on losing the case are not common in actual civil litigation. However, concepts that share the same spirit exist, especially in mediation and arbitration, where parties are sometimes asked to “bet” on their valuations. As part of the mediation technique that is known as “bottom-line wager,” the mediator asks the parties to place a “bet” on their settlement offers. This bet implies that if the mediation fails and a trial materializes, the loser must pay that wager to the rival party.¹²⁸ In arbitration, the common procedure known as “baseball arbitration” requires the parties to submit final offers to the arbitrator, where the latter must select one of the offers with no discretion to choose an intermediate value.¹²⁹ This process penalizes unrealistic offers—which increase the risk that the arbitrator would pick the rival’s offer.¹³⁰ One variation to

be supplanted by a contingent payment. For a brief discussion see *supra* notes 118–20 and accompanying text. Eighth, we stress that we do not require courts to be perfect decision-makers. Judges in our model can make errors. It suffices that courts, on average, are able to distinguish between strong and weak parties. Ninth, litigation signals can be risky, as they enhance the repercussions of a trial. Therefore, risk-aversion tempers the tendency to use litigation signals. Nonetheless, we predict that many litigants are approximately risk-neutral, or, at the least, can hedge the added risk of litigation signals relatively cheaply, e.g., through third-parties (*cf. supra* note 121 and accompanying text). Tenth, we assumed that the informed party proposes a single offer, meaning that she exploits the entire surplus from any settlement. Single offer is a standard tool in the relevant literature, with independent justifications. See *supra* note 89 and accompanying text. The logic in the text pertains to any situation in which the informed party stands to gain something from revealing information—*i.e.*, any setting in which the uninformed party does not have all bargaining power.

128. Michael D. Young, *Make A Bottom-Line Wager to Break A Negotiation Impasse*, 20 ALTERNATIVES TO HIGH COST LITIG. 63, 86–87 (2002) (describing a conditional sum of \$20,000). For additional examples see also JEFFREY KRIVIS, IMPROVISATIONAL NEGOTIATION 290–95 (2006). We thank Dan Klerman for suggesting this point.

129. *E.g.*, Jennifer Gerarda Brown & Ian Ayres, *Economic Rationales for Mediation*, 80 VA. L. REV. 323, 352 n. 79 (1994) (“In final offer arbitration, each party submits a settlement figure to the arbitrator, who must choose one or the other [and] cannot ‘split the baby’ . . .”).

130. *E.g., id.* (“Knowing that the arbitrator will choose either its figure or the opponent’s, each party is . . . motivated to propose a more reasonable figure [and] the probability of settlement increases”).

baseball arbitration, which comes closer to our hypotheticals, includes an explicit stipulation of a penalty, to be paid by the losing party in addition to the amount awarded by the arbitrator.¹³¹

The strategy of “betting” on one’s claim, then, is not unknown, at least in mediation and arbitration proceedings.¹³² Indeed, these practices are considered an effective “impasse breaker.”¹³³ These examples notwithstanding, in ordinary litigation we generally do not observe commitments to augment the judgment conditional on losing. Even in arbitration and mediation these procedures do not seem to be widely used.¹³⁴ We thus identify several limitations on the actual use of litigation signals.

First, transaction costs may hinder signaling. While unilateral and third-party signals are relatively easy to execute, we have shown that they are not beneficial to strong informed litigants in typical cases, and will not ordinarily be triggered. However, cooperative signals—which in principle are always effective—are more difficult to undertake, as they require the parties to agree on bilateral commitments.¹³⁵ These transaction costs notwithstanding, we should still expect at least some cooperative signaling.¹³⁶

Second, the overarching legal environment does not seem to encourage litigation signals. The next Part demonstrates how specific doctrines inhibit signaling, suggesting modifications that can create an environment more conducive to litigation signals.

131. See Christian Borris, *Final Offer Arbitration from a Civil Law Perspective: How to Play Baseball in Soccer Country*, 24 J. INT’L ARB. 307, 309 (2007) (“In some clauses, the penalty can be as high as 50% of the difference between the parties’ final positions.”).

132. In addition to arbitration and mediation, we found divorce agreements that resemble the signaling that this Article discusses—divorcing parties sometimes divide their joint property through a settlement agreement in which they commit that, should one party hide an asset and that asset is later discovered, the court would transfer the entire value of the undisclosed asset to the other party as a penalty. *E.g.*, *In re Marriage of Rossi*, 90 Cal. App. 4th 34 (2001).

133. Michael D. Young, *Bottom-Line Negotiating*, 49 FED. LAW. 20, 22 (2002) (discussing bottom-line negotiation). See also Michael Carrell & Richard Bales, *Considering Final Offer Arbitration to Resolve Public Sector Impasses in Times of Concession Bargaining*, 28 OHIO ST. J. ON DISP. RESOL. 1, 20–21 (2013) (presenting empirical evidence that shows that baseball arbitration encourages settlements). Baseball arbitration with a stipulated penalty is considered a particularly effective tool. Borris, *supra* note 131, at 309.

134. We base this impression on interviews with practicing attorneys and our research of arbitration and mediation techniques.

135. *Cf.* Donohue, *supra* note 61, at 1109–10 (distinguishing between procedural stipulations that improve both sides’ positions and stipulations that are overall beneficial but require side-payments, and explaining why the latter requires “added negotiation costs that . . . will prevent some of [them].”).

136. *Cf.* Bone, *Party Rulemaking*, *supra* note 89, at 1341 (despite negotiating difficulties “side payments are . . . possible during litigation.”).

Third, lawyers may pose the most severe obstacle for the use of litigation signals in general and monetary commitments in particular. Naturally, lawyers have an interest in prolonged litigation;¹³⁷ this is particularly true for defense lawyers, who are paid on an hourly basis rather than contingency fees. Lawyers, then, may hesitate to take proactive and more sophisticated steps—such as committing to an augmented award—to induce settlements.¹³⁸ Litigation signals are also risky, and they seem to require extra-effort from lawyers to explain to their clients.¹³⁹ Relatedly, lawyers seem to fear that the use of signaling would expose them to malpractice claims.¹⁴⁰ To illustrate, while a waiver of defense can signal information,¹⁴¹ failure to pursue a defense is a common legal malpractice allegation.¹⁴² More generally, litigation signals magnify the risk of an adverse judgment, but lawyers are commonly advised not to take risky steps in order to avoid prospective liability.¹⁴³ Monetary commitments are particularly difficult for lawyers to undertake on behalf of their clients, due to restrictive ethics norms.¹⁴⁴ More generally, there seems to be little innovation in the legal market.¹⁴⁵ In this sense our Article can be read as a call for lawyers to engage in more aggressive signaling in asymmetric information settings, to the benefit of their clients. We briefly discuss these issues at the end of this Article.

2. Other Commitments

Monetary commitments conditioned on losing the case are not common.¹⁴⁶ However, it is hard to believe that litigants do not attempt to indicate their strength to their rival, even if they do so in rudimentary ways. Indeed, at least intuitively and implicitly, lawyers use low

137. *E.g.*, Christopher R. Drahozal & Peter B. Rutledge, *Contract and Procedure*, 94 MARQ. L. REV. 1103, 1118 (2011) (pointing to the incentives of lawyers to leave certain issues vague in order to encourage disputes.).

138. *Cf.* Young, *supra* note 133, at 20–21 (describing how lawyers, in contrast to their clients, hesitate to bet on their settlement offers in mediation proceedings).

139. Indeed, bottom-line mediation seems not to fit settings in which the “negotiating representative has no authority to increase the risk to his or her principal [such as] an insurance adjuster or governmental representative.” *Id.* at 22.

140. This was a recurrent issue in our discussions with practicing attorneys.

141. *See supra* Part II.B.2.

142. *E.g.*, Ronald E. Mallen, 4 *Legal Malpractice* § 33:47 (2017 ed.) (available at Westlaw) (discussing cases).

143. *Cf. id.* at § 30:57 (discussing a case in which the court “criticized defense counsel for using a risky defense that increased the prospects of an excess judgment.”).

144. *See infra* note 154 and accompanying text.

145. *See infra* notes 259–65 and accompanying text.

146. *See supra* note 134 and accompanying text.

settlement offers as a basic signaling device that communicates their willingness to face a trial.¹⁴⁷ One should expect lawyers to employ more sophisticated techniques to realize the benefits of signaling.¹⁴⁸

Importantly, parties do not have to use explicit, monetary multipliers to signal their merits. Signals can be expressed through various other forms, such as voluntary one-way fee-shifting stipulations, procedural concessions, and award-modification agreements. Parties regularly stipulate over default procedures,¹⁴⁹ and award-modification agreements are frequent.¹⁵⁰

The side-payments that are essential to cooperative signaling do not have to be monetary either. Rather, they can be nonfinancial in kind, embedded in the process of pre-trial negotiation over procedural concessions. Where the defendant has private information with regard to its liability, for example, the plaintiff can agree to dismiss a claim whose value is easy to measure in exchange for stipulating to generous damages.¹⁵¹ This agreement is essentially similar to our cooperative signal example (Hypothetical V), in which the defendant committed to augment its liability in exchange for a fixed payment. Interestingly, Professors J.J. Prescott and Kathryn Spier, who explore high-low agreements, identify a similar practice in that context.¹⁵² They predict that a side-payment should typically accompany high-low agreements—but do not find evidence for such payments.¹⁵³ While there may be

147. See *supra* note 98 and accompanying text.

148. Cf. the practical advice to “embrace” unfavorable documents, which resembles signaling in spirit—“It tells jurors . . . that you want them to see even harmful evidence, an unmistakable sign your case is strong.” See David Berg, *The Trial Lawyer*, LITIGATION, Spring 2000, at 6, 10.

149. See, e.g., Eisenberg & Miller, *supra* note 58, at 354 (documenting the willingness of commercial parties in pre-dispute agreements to opt out of the default procedures concerning jury trials and attorney’s fees); David A. Hoffman, *Whither Bespoke Procedure?*, 2014 U. ILL. L. REV. 389, 419–20 (summarizing findings regarding pre-dispute procedural agreements). Nonetheless, it seems that parties do not fully employ the opportunities to customize procedures, especially after the dispute began. See *infra* notes 266–73 and accompanying text.

150. See *supra* notes 73 and 79 and accompanying text.

151. Cf. Prescott & Spier, *supra* note 13, at 97 n.145 (demonstrating procedural concessions in lieu of monetary side-payments through an actual case, in which the parties agreed to forgo expert medical evidence and the plaintiff dismissed her claim for punitive damages; Verdict and Settlement Summary, *E.P. v. Gannett*, No. 09-cv-02091, 2010 WL 4016047 (N.D. Ohio July 21, 2010)).

152. Prescott & Spier, *supra* note 13, analyze the justifications for high-low agreements under settings that do not involve asymmetric information. Recall that these agreements can also be explained by the desire to signal private information. See *supra* notes 71–73, 82 and accompanying text.

153. Prescott & Spier, *supra* note 13 (arguing that “the flexibility (and therefore the potential attractiveness) of [award-modification agreements] is enhanced by the possibility of

various reasons for the absence of monetary side-payments, including restrictive ethics rules that require explicit client consent,¹⁵⁴ Prescott & Spier suggest that non-monetary procedural concessions, which are well-known in practice, supersede monetary side-payments.¹⁵⁵

Taken in this light, the litigation signals approach can explain various practices. While direct empirical data is hard to collect and future research may shed more light on this issue, existing data seems to cohere with the litigation signals perspective.

First, the desire to signal explains various practices—such as the use of one-way fee-shifting provisions, waivers of claims and defenses, and generous award-modification agreements—that are at least somewhat puzzling.¹⁵⁶ Other, more mundane practices—for instance, the willingness of informed parties to speed up litigation, rather than delay the process—can also be explained through the signaling framework.¹⁵⁷

Second, the litigation signals perspective can explain why we often see early settlements. As we discuss below, most litigants find the way to settle *before* discovery, suggesting that there are important channels to convey information regardless of discovery.¹⁵⁸ To further illustrate this point consider a recent study that finds that the mere filing of a non-discovery motion encourages settlements.¹⁵⁹ This finding is somewhat surprising, as these motions seem to have no direct informational value.

an accompanying side payment” and providing a graphical and numerical illustration for this proposition, *id.*, at 96; and asserting that nonetheless “contracts with monetary side payments are rare.” *Id.*, at 97).

154. See Prescott & Spier, *supra* note 13, at 130 n.294 (referring to MODEL RULES OF PROF'L CONDUCT r. 1.2(1) (AM. BAR. ASS'N 1983), and stating that “one of the reasons financial side payments are relatively rare . . . is that they require client consent, and thus are more costly for lawyers to negotiate . . . By contrast, [procedural concessions] (e.g., waiving a defense) are within a lawyer’s strategic discretion, making them, all else equal, easier to deploy.”).

155. Prescott & Spier, *supra* note 13, at 97 (“[P]artial settlements in which an early monetary transfer between the parties would make sense are, in our research, uniformly accompanied instead by a nonfinancial sidepayment [such as] a compensating in-kind partial-settlement term.”); see also Bone, *Party Rulemaking*, *supra* note 89, at 1341–42 (“[Instead of monetary side-payments] parties could trade [procedural] benefits . . .”).

156. See, e.g., *supra* notes 61–64 and accompanying text (discussing one-way fee-shifting provisions and the absence of direct explanation for their use); *supra* note 82 (an illustrative liability-only, generous-damages agreement).

157. Our interviewees suggest that delaying trial is a typical strategy, which is sometimes foregone in order to indicate confidence in one’s case. Of course, the desire to forego the opportunity to delay trial can stem from various other reasons rather than signaling.

158. See *infra* notes 180–86 and accompanying text.

159. Christina L. Boyd & David A. Hoffman, *Litigating Toward Settlement*, 29 J.L. ECON. & ORG. 898 (2012). Boyd and Hoffman’s sample comprises corporate veil-piercing cases, which may well involve asymmetric information.

The litigation signals perspective can provide an explanation.¹⁶⁰ Waivers are a signaling device, and they can be consummated implicitly, i.e., refraining from raising a certain defense.¹⁶¹ In that sense, every filed motion can be utilized to convey valuable information—through the arguments the parties choose *not* to raise, in addition to the arguments they explicitly make. More generally, there seems to be a discrepancy between the fact that the vast majority of cases—“on the order of 95 percent”—are settled and the general predictions of the theoretical models, which suggest that settlements should be less frequent.¹⁶² The use of litigation signals can help bridge this gap between the evidence and the theoretical models.¹⁶³

The foregoing phenomena have, of course, alternative explanations. Litigants may have independent reasons to adopt one-way fee-shifting, waive important procedural rights, agree to generously modify the award at trial, etc. Non-discovery motions can have direct informational value that facilitates settlements, and parties may be able to disclose information voluntarily, before trial, bridging informational gaps in various ways. However, taken overall it is plausible to think that the litigation signals theory that this Article presents can explain at least some of these practices. In sum, litigation signals in the form of monetary commitments and financial side-payments do not seem to exist in real-world litigation. However, theory and evidence suggest that litigation signals are more commonly effectuated through other outlets, in particular, procedural modifications.

IV. LEGAL AND POLICY IMPLICATIONS

The capacity of litigants to signal the strength of their cases, through multiple channels, has various implications. This Part focuses on three issues: substituting for formal discovery; the freedom of parties to fashion procedures; and the creation of court-sponsored mechanisms to facilitate signaling.

160. *Cf. id.* at 904–05 (proposing theoretical explanations without discussing signaling).

161. We elaborate on the signaling power of implicit waivers below, *infra* notes 217–29 and accompanying text.

162. *See* Farmer & Pecorino, *supra* note 41, at 157.

163. According to Farmer and Pecorino, the theoretical explanation for this discrepancy is the capacity of litigants to voluntarily disclose pieces of information. *Id.* While this explanation seems plausible in many cases, in many other situations parties cannot credibly convey information, *see supra* notes 27–29 and accompanying text, and they have to signal it through other means.

A. Substituting (Partially) for Formal Discovery

If litigants can signal information and bridge informational gaps the whole debate on discovery is highly affected. The right to discovery has been curtailed through the recent amendments to the Federal Rules of Civil Procedure, and this move has triggered fierce reactions.¹⁶⁴ Narrow discovery, the argument goes, magnifies asymmetric information problems and inhibits access to justice.¹⁶⁵ Broad discovery, by contrast, entails enormous costs.¹⁶⁶ However, to the extent litigants convey information through signaling, signaling is a potential substitute for discovery.¹⁶⁷ Our account suggests, then, a more nuanced approach to the debate over discovery. On the one hand, the detrimental effects of the anti-discovery trend may be more modest than those the proponents of broad discovery predict; on the other hand, the costs of broad discovery seem smaller than those suggested by its opponents.

In 2015, the Federal Rules of Civil Procedure were amended to constrain the right to discovery in various ways. Consider, for example, the following two limitations. First, the new rules emphasize that discovery proceedings should be “proportional to the needs of the case” in light of relevant factors.¹⁶⁸ The stated goal is to “reinforce[] the . . . obligation of the parties to consider [the proportionality] factors.”¹⁶⁹ Conceivably, this change will place a greater burden on the requesting party “to show that its discovery request was proportional.”¹⁷⁰ Second, the amended rules now “include an express recognition” for district courts to “allocate expenses for . . . discovery.”¹⁷¹ This change threatens to shift the expenses of discovery to the requesting party, typically, the uninformed plaintiff.¹⁷²

The debate over discovery and the 2015 Amendments have inspired

164. *Supra* notes 1–2 and accompanying text.

165. *E.g.*, *supra* note 4 and accompanying text.

166. As noted by the Supreme Court, in cases in which discovery is employed it “accounts for as much as 90% of litigation costs.” *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 559 (2007) (referring to an empirical study on discovery).

167. Litigation signals, of course, are not identical to discovery, as they do not actually *reveal* information; but they do *indicate* information, and thus facilitate settlements. *Infra* notes 178–79 and accompanying text.

168. See FED. R. CIV. P. 26(b)(1).

169. FED. R. CIV. P. 26(b)(1) advisory committee’s note to 2015 amendment.

170. Moore, *supra* note 2, at 1116.

171. FED. R. CIV. P. 26(c)(1)(B) advisory committee’s note to 2015 amendment.

172. See Moore, *supra* note 2, at 1116. In addition to these two limitations on discovery the 2015 Amendments include other restrictive changes. See *generally id.*, at 1106–29. *But see* Steinman, *supra* note 1, at 8 (concluding that “the 2015 amendments do not mandate more restrictive approaches” and that the “key battleground . . . will be in the federal courts, as judges are called upon to interpret . . . the rules in particular cases.”).

strong views from both sides, for and against the right to broad discovery.¹⁷³ On the face of it, as discovery is deemed essential to bridging informational gaps the amendments aggravate the problems associated with asymmetric information. Indeed, numerous stakeholders—including numerous scholars—have lamented the “anti-plaintiff” approach reflected by these amendments.¹⁷⁴ On the other hand, clearly it is exactly in asymmetric information situations that the informed party is charged with the costly burden of responding to discovery,¹⁷⁵ and these added costs pressure defendants to settle unmeritorious cases.

While we do not seek to argue for or against a broader right to discovery, we offer a fresh perspective to enrich this debate. Our discussion challenges the notion that “the road to achieving a level of information parity must be paved with mandatory disclosure rules.”¹⁷⁶ We suggest that informed parties, who stand to incur litigation expenses, have independent, strong incentives to convey their private information to the uninformed litigant. Moreover, we showed earlier that informed parties have at their disposal various techniques to *indirectly* convey information—even when these parties lack the ability to communicate that information directly.¹⁷⁷

Our theoretical account influences the debate over discovery in two ways. First, we suspect that the gloomy predictions regarding the anti-discovery changes should be qualified; the capacity of privately-informed litigants to convey information in order to save future trial costs can mitigate these effects. We stress that this argument is most forceful when one believes that trial has the capacity to reveal the truth, i.e., absent discovery, the parties will have a similar result (on average) at trial.¹⁷⁸ Moreover, indirect flow of information, through litigation

173. *E.g.*, Moore, *supra* note 2, at 1112 (“Plaintiff’s lawyers almost unanimously opposed [the contraction of discovery under the 2015 Amendments], and defendant’s lawyers almost unanimously favored [it].”).

174. Moore, *supra* note 2, at 1112. Notably, during the rulemaking process 171 law professors, led by Janet Alexander, Judith Resnik and Stephen C. Yeazell, “urge[d] th[e] Committee [on Rules of Practice and Procedure] to reject the proposed amendments to the Federal Rules of Civil Procedure that would limit the scope of discovery.” Letter of 171 Law Professors Urging Rejection of Changing Federal Rules to Limit Discovery and Eliminate Forms (Feb. 18, 2014), http://www.lfcj.com/uploads/3/8/0/5/38050985/frcp_171_law_professors_urgin_rejection_of_changing_federal_rules_2.18.14.pdf.

175. *See* FED. R. CIV. P. 26(b)(1) advisory committee’s note to 2015 amendment. “[T]he burden of responding to discovery lies heavier on the party who has more information.”

176. Rhee, *supra* note 5, at 547; *see also supra* notes 6, 42 and accompanying text.

177. As explained earlier, *supra* notes 27–29 and accompanying text, litigants can sometimes transmit information directly, *e.g.*, handing over favorable information; however, for various reasons, such a direct informational flow is not always feasible.

178. Empirical studies on this issue are unfortunately rare. *Cf.* Kuo-Chang Huang, *Does*

signals, is of course not akin to discovery. Litigation signals *indicate* information, which facilitates settlements; they do not actually reveal new information. Thus, discovery may well have other benefits, which litigation signals lack.¹⁷⁹ The general point, though, remains—absent broad discovery parties still have both the incentives and the capacity to indirectly transmit information.

Second, our account suggests that a broad right to discovery is not as costly as it seems to be. While discovery proceedings may be expensive in and of themselves, mindful parties can often avoid these costs through pre-discovery signaling.

While our arguments are theoretical, some evidence corroborates our position. To illustrate our last point consider the pre-2015 world, an era of broad discovery. In this world, many cases settled at an early stage without the need to conduct discovery.¹⁸⁰ In fact, while in the last decades of the twentieth century the right to discovery has become broader,¹⁸¹ there was a parallel, sharp increase in the fraction of cases that settled after filing and *before* discovery.¹⁸² This trend seems counterintuitive—in light of broader discovery, why would the parties settle *before* it? One can argue that this increase in (very) early settlements is understandable as trials became more costly.¹⁸³ When costs of litigation rise, parties are less motivated to litigate.¹⁸⁴ Nevertheless, given the innate informational gaps between defendants and plaintiffs, and that discovery is relatively cheap for plaintiffs,¹⁸⁵ we could expect the uninformed plaintiff to restrain its desire to settle until discovery provides more information. Our theory of litigation signals complements the picture. Facing sizeable costs, parties preferred to settle

Discovery Promote Settlement? An Empirical Answer, 6 J. EMPIRICAL LEGAL STUD. 241 (2009) (providing empirical evidence for the proposition that the introduction of discovery proceedings in Taiwan increased the rate of settlements).

179. For instance, discovery enables third-parties to use the public information that the process reveals.

180. “The largest number of settlements occur immediately after a complaint is filed, and *before any motion practice or discovery occurs.*” Hubbard, *supra* note 84, at *2.

181. *E.g.*, John H. Beisner, *Discovering A Better Way: The Need for Effective Civil Litigation Reform*, 60 DUKE L.J. 547, 561–72 (2010).

182. *E.g.*, Marc Galanter, *The Vanishing Trial: An Examination of Trials and Related Matters in Federal and State Courts*, 1 J. EMPIRICAL LEGAL STUD. 459, 482 (2004).

183. Broader discovery presumably increases the costs of litigation. *See, e.g.*, *supra* notes 166, 181 and accompanying text.

184. *E.g.*, *supra* note 95 and accompanying text.

185. As it is the informed party who typically bears the major costs of discovery. *See* FED. R. CIV. P. 26(b)(1) advisory committee’s note to 2015 amendment; *see also* Geoffrey P. Miller, *Preliminary Judgments*, 2010 U. ILL. L. REV. 165, 181 (2010) (“[I]t is cheap for the plaintiff to file a complaint but expensive for defendants to comply with discovery demands.” (footnote omitted)).

early, even before discovery; litigation signals enabled the informal flow of information between the parties and facilitated the urge to early settlements. In an era of broad discovery, then, experience suggests that the vast majority of litigants found their way to settle before it. Discovery was costly, but rarely was it realized. Indeed, per filed case, costs of discovery seem to be smaller than expected.¹⁸⁶

We enrich, then, the usual debate on discovery. In a world with no discovery it is in the interest of the parties to inform each other in order to avoid costly trials, and they have a variety of litigation maneuvers to achieve this goal. In a world of broad and costly discovery, we will expect the parties to signal information to avoid its expenses. Importantly, our litigation signals framework explains how parties could implicitly transmit information before discovery even when they cannot directly do so, e.g., because they lack favorable evidence to hand over.¹⁸⁷ Therefore, changes in the scope of formal discovery, including the 2015 Amendments, should have a limited effect on the actual position of uninformed litigants and the costs to informed ones. We stress that our argument pertains to formal discovery proceedings, as opposed to other procedural mechanisms that indirectly limit the scope of discovery¹⁸⁸ and the ability of plaintiffs to reach trial.¹⁸⁹

B. Party Rulemaking

The litigation signals perspective emphasizes litigants' ability to convey information through a wide array of voluntary commitments. Therefore, it directly pertains to the debate on the extent to which litigants should be free to fashion their procedures—what Robert Bone refers to as party rulemaking.¹⁹⁰ The more freedom parties have the easier it is for them to signal information. In this sense, the litigation signals perspective adds another layer, in favor of customized procedure,

186. E.g., Emery G. Lee III & Thomas E. Willging, *Defining the Problem of Cost in Federal Civil Litigation*, 60 DUKE L.J. 765, 779–81 (2010); Charles Silver, *Does Civil Justice Cost Too Much?*, 80 TEX. L. REV. 2073, 2094–95 (2002).

187. See *supra* notes 27–29 and accompanying text (in many cases parties would like to transmit information, but lack the means to do so).

188. In particular, in the last decade the Court directed trial courts to dismiss—at the outset of litigation and before discovery kicks in—cases that do not present a sufficient factual threshold. E.g., *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 570 (2007); *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009). To the extent defendants can fend off uninformed plaintiffs relatively *costlessly* at the outset, they need not use litigation signals to convey their merits.

189. For similar reasons, to the extent plaintiffs cannot reach a trial without discovery, e.g., because otherwise they lose on summary judgment, a limited right to discovery could induce defendants to withstand discovery proceedings rather than signal their true type before discovery.

190. Bone, *Party Rulemaking*, *supra* note 89.

to the general discussion on party rulemaking. In addition, the litigation signals perspective can provide concrete policy recommendations regarding several procedural dilemmas that courts struggle with.

1. Default or Mandatory Rules of Procedure?

Should rules of procedure be mandatory or default? Can parties, in actuality, customize their own procedures? With regard to the first, normative question, the literature has struggled to define the proper scope of party rulemaking, laying out various for-and-against considerations. The benefits of customized litigation are evident. Contracts in which parties define their procedures break the one-size-fits-all nature of legal procedure. They thus enable parties to benefit from procedures that better suit their taste,¹⁹¹ and can reduce the costs to the court system.¹⁹² The capacity to agree on individualized procedures enhances party autonomy and participation,¹⁹³ plausibly, core values of adversary systems. These benefits notwithstanding, party rulemaking also raises serious difficulties. Delegating to the parties the power to shape procedure is problematic when consent is not perceived as meaningful and the bargaining capacities of the parties are far from being equal.¹⁹⁴ And even where there is actual consent, some procedural agreements inflict costs on third parties and/or the legal system.¹⁹⁵ Finally, parties' choices can harm the legitimacy of the legal system.¹⁹⁶ These general arguments form the core of the "sharply divided"¹⁹⁷ debate over party rulemaking, and they pertain, in varying extents, to procedural choices that are made before and after a dispute arises.¹⁹⁸

191. *E.g.*, Jaime Dodge, *The Limits of Procedural Private Ordering*, 97 VA. L. REV. 723, 731 (2011) (describing the argument "that allowing parties to tailor the process to their particular dispute can increase both certainty and efficiency." (footnotes omitted)). To illustrate, in technologically complex disputes parties can benefit from waiving the right to a jury trial. Bone, *Party Rulemaking*, *supra* note 89, at 1356.

192. Procedural contracts reduce the costs of the parties, and to the extent private and public costs are correlated they also reduce the costs to the legal system. *See id.*

193. *See, e.g., id.*, at 1357–59 (critically examining these arguments).

194. *See, e.g., id.*, at 1360–69. *See also* Michael L. Moffitt, *Customized Litigation: The Case for Making Civil Procedure Negotiable*, 75 GEO. WASH. L. REV. 461, 516 (2007) ("customization could strip litigation of procedures designed to protect the weakest . . .").

195. *E.g.*, Bone, *Party Rulemaking*, *supra* note 89, at 1372–78. Thus, "litigants could not mutually agree to a process that triples the number of days spent in trial." Moffitt, *supra* note 194, at 508.

196. Certain procedures "like a coin flip . . . seem sharply at odds with what courts are supposed to do . . . [and] should be categorically forbidden . . ." Bone, *Party Rulemaking*, *supra* note 89, at 1384.

197. *See* Bone, *Party Rulemaking*, *supra* note 89, at 1333.

198. A separate issue, which we do not discuss, is whether the parties are more likely to enter into procedural agreements before or after the dispute arises. *Cf. id.* at 1340 ("Some

The literature on procedural contracts has generally failed to identify another consideration—the link between customized procedures and settlements.¹⁹⁹ *Default rules of procedure facilitate signaling. Mandatory procedures do not.* This distinction stems from the fact that strong informed parties can indicate their strength by undertaking a commitment to change a default rule—to agree to a one-way fee-shifting provision, waive a statute of limitations defense, etc. A mandatory requirement applies to all defendants, strong and weak alike, and it does not allow the strong ones to convey their strength by undertaking additional obligations.²⁰⁰ Therefore, greater procedural freedom expands avenues to signal information, generating more settlements. The litigation signals theory adds, then, a deeper understanding of the stakes to the general for and against arguments.

This conclusion entails a host of policy implications as current procedures do not fully endow the parties with the power to modify the rules. On the face of it, the rules of procedure seem largely as default rules.²⁰¹ Indeed, we do believe that there are many situations in which parties use procedural modifications to signal information, implicitly or explicitly.²⁰² However, things are more nuanced, and the capacity of parties to stipulate over the rules is more limited than it first seems. First, some notable procedures are mandatory. Subject matter jurisdiction is a classic example—parties cannot agree, explicitly or implicitly, to litigate in a court that lacks jurisdiction.²⁰³ There are other examples. Previously,

commentators assume that cooperation is nearly impossible during litigation, but they tend to exaggerate the difference between *ex ante* and *ex post*”).

199. “[O]ther than a few hints here and there, th[e] connection [between procedure modification agreements and settlements] has never been identified.” Prescott & Spier, *supra* note 13, at 83 (footnote omitted).

200. To further illustrate this point, take the American rule, which holds that each party bears its legal expenses. Under a regime which allows modifications to this rule, the strong defendant may signal by committing to one-way fee-shifting. She could do so through unilateral, third-party, or cooperative signaling, under the conditions we defined in Part III.A. In a regime that does not allow stipulations to the American rule, the strong defendant does not have the option to signal through committing to one-way fee-shifting. Under a regime that *mandates* one-way fee-shifting, both weak and strong defendants are committed to pay their rival should they lose, and the strong defendant again cannot distinguish herself from the weak one.

201. See, e.g., STEPHEN C. YEAZELL, CIVIL PROCEDURE 169 (4th ed. 2004) (“One of the hallmarks of U.S. law is the extent to which the rules of procedure are ‘default’ rules . . .”). Several rules explicitly authorize the parties to modify the rules. E.g., Colter L. Paulson, *Evaluating Contracts for Customized Litigation by the Norms Underlying Civil Procedure*, 45 ARIZ. ST. L.J. 471, 484 (2013) (noting rules that allow parties to stipulate the scope of discovery and amend pleading, FED. R. CIV. P. 26(f), 29, 15(a)).

202. See *supra* Part III.B.

203. E.g., Shay Lavie, *Are Judges Tied to the Past? Evidence from Jurisdiction Cases*, 43 HOFSTRA L. REV. 337, 343–46 (2014).

we noted the signaling power of one-way fee-shifting stipulations.²⁰⁴ Nonetheless, several states—most notably California—specifically forbid these agreements.²⁰⁵

But even beyond these specific enclaves of mandatory provisions parties do not seem to exercise considerable freedom in shaping their disputes. Perhaps surprisingly, it seems that “most lawyers and potential litigants do not *think* of the rules of litigation as default rules,”²⁰⁶ and in practice opportunities for customized litigation appear to be largely unfulfilled.²⁰⁷ We suspect that lack of innovation in the legal market is one important explanation.²⁰⁸ But another plausible part of the story is the restrictive attitude of policymakers and courts. Even if procedural customization is not explicitly forbidden, courts that are reluctant to enforce procedural understandings deter litigants from entering into such agreements. “[W]ithout formal assurance of legal enforcement, parties would have trouble making credible commitments.”²⁰⁹ Indeed, courts seemingly hesitate to enforce various agreements, such as stipulations regarding the scope and timing of discovery, agreements on the admissibility of evidence, and commitments not to file amended pleadings.²¹⁰

Particularly, we observe difficulties in enforcing stipulations that we identify as potential signals. Courts often “find ways to avoid” fee-shifting stipulations, such that it is “difficult for parties to depend on the enforcement” of such provisions.²¹¹ Some courts reject contractual understandings to forego a statute of limitations defense,²¹² and limit agreements that modify the award at trial.²¹³ Mary Carter agreements, which can be used by co-defendants to signal information,²¹⁴ are

204. See *supra* Part II.B.1.

205. CAL. CIV. CODE § 1717(a). Other states with similar restrictions include Oregon, Washington, and New York. Eisenberg & Miller, *supra* note 58, at 329 n.6, 342.

206. Henry S. Noyes, *If You (Re)build It, They Will Come: Contracts to Remake the Rules of Litigation in Arbitration's Image*, 30 HARV. J.L. & PUB. POL'Y 579, 612 (2007).

207. See *infra* notes 275-282 and accompanying text.

208. We briefly discuss this issue below. See *infra* notes 268-274 and accompanying text.

209. Bone, *Party Rulemaking*, *supra* note 89, at 1351 (discussing the lack of case law in the field and the capacity of judges to refuse to enforce procedural agreements).

210. Moffitt, *supra* note 194, at 471, 473, 468.

211. Paulson, *supra* note 201, at 507, 510. For a survey of the doctrine see *id.*, at 506-11.

212. *Id.* at 500.

213. *Id.* at 501.

214. As discussed above, *supra* notes 74-76 and accompanying text, in Mary Carter agreements one co-defendant essentially agrees to pay the plaintiff conditional on the outcome of the other trials. Technically, one co-defendant settles and in exchange the plaintiff commits to credit to the settling defendant any amount the plaintiff later recovers against non-settling defendants. Mary Carter agreements can thus signal the strength of the settling co-defendant, relative to the remaining defendants. See *supra* note 78 and accompanying text.

prohibited in several jurisdictions.²¹⁵ Finally, there are reasons to believe that courts will hesitate to enforce explicit monetary commitments that are conditional on the judgment, especially those that specify a non-trivial augmentation of the award. A fee-shifting agreement “that explicitly calls for unreasonable fees will be struck down as punitive”,²¹⁶ and in contract law liquidated damages, an analogous monetary commitment, are disfavored when they are “deemed to constitute a penalty.”²¹⁷

The general upshot is clear: Litigation signals provide another justification for party rulemaking, where courts and policymakers do not seem to fully facilitate it. The restrictions on parties’ freedom to fashion their procedures definitely have independent policy reasons. Subject matter jurisdiction is an external limit on the power of courts.²¹⁸ Restrictions on one-way fee-shifting agreements seem to be motivated by the desire to prevent powerful parties from drafting disadvantageous provisions.²¹⁹ Mary Carter provisions also raise concerns.²²⁰ More broadly, there are many reasons to hesitate to enforce procedural contracts.²²¹ We are not seeking to doubt the wisdom of policies that moderate the scope of party rulemaking. Rather, our goal is to stress that these restrictions narrow the array of signaling options available to informed parties. In sum, parties do seem to signal information through procedural modifications, but the opportunities to do so are not fully available in the current legal climate.

2. *Lessons from the Litigation Signals Perspective*

In addition to the general argument in favor of procedural freedom, the litigation signals perspective can contribute to the understanding of specific procedural dilemmas.

a. *Self-penalizing Commitments*

Effective signaling requires the “good” defendants to commit to a penalty, in order to distinguish themselves from weak ones. The greater

215. Bernstein & Klerman, *supra* note 74, at 2216–18.

216. Paulson, *supra* note 201, at 510.

217. *Id.* at 504 (internal quotation marks omitted). “[L]iquidated damages are disfavored . . . even when the transaction was voluntary and the parties have equal bargaining.” *Id.*; see also *infra* Part IV.B.2.a,d (discussion aversion to self-penalizing commitments; showing that monetary commitments conditional on the judgment can be vulnerable to anti-gambling provisions).

218. Lavie, *supra* note 203, at 343–46.

219. *E.g.*, Krent, *supra* note 62, at 2043 n.25.

220. Bernstein & Klerman, *supra* note 74, at 2216–18.

221. See *supra* notes 194–98 and accompanying text.

the penalty, the more effective the signal is—and thus we should expect parties to undertake onerous commitments. However, it seems that courts loath such penalizing commitments. For example, seemingly “punitive” fee-shifting and liquidated damages agreements are regularly not enforced.²²² Likewise, courts limit the enforcement of voluntary, meaningful penalties for discovery abuse.²²³

We can speculate as to the reasons for this strong aversion to voluntarily commit to penalties. Courts appear to treat these agreements as unfair as the penalty seems excessive at the time in which it is realized; but judges give little weight to the incentives of parties to enter into these agreements at the outset.²²⁴ Relatedly, courts often prefer not to constrain their decision-making, and they favor a merits decision over a procedural penalty.²²⁵

The aversion to self-penalizing commitments presumably has policy reasons. Our goal is to highlight the other side of the ledger: restrictive judicial policy undermines effective signaling—through monetary and procedural concessions alike. Against the interest in ex-post fairness, there exists a social interest in respecting the ex-ante commitments of the parties; against the interest in a merits decision one should consider the savings in trial expenses.

b. Credible Commitments, Reneging, and Rigid Procedures

A related point is the capacity of parties to renege on their stipulations. At the core of effective signals lies the “good” party’s promise to undertake an obligation that the “bad” defendant is unwilling to offer. If the plaintiff knows that defendants can later change their mind the signal loses its informative value. To fully tap the benefits of contractual freedom, then, courts should not allow parties to renege on their contractual stipulations. Rigid rules and deadlines preclude the possibility of late changes of mind and ensure that parties can commit to irreversible choices.²²⁶

222. See *supra* notes 207–08 and accompanying text.

223. *E.g.*, *TransAmerican Nat. Gas Corp. v. Powell*, 811 S.W.2d 913, 918 (Tex. 1991) (“Sanctions which are so severe as to preclude presentation of the merits of the case should not be assessed absent a party’s flagrant bad faith or counsel’s callous disregard for the responsibilities of discovery under the rules.”).

224. See Paulson, *supra* note 201, at 525 (“courts usually determined the reasonableness of the procedure by reference to the fairness of its effect in the lawsuit, rather than the ex ante fairness of the contractual bargain.”).

225. *Id.* at 523, 524 (“Clauses that limit the relief that a judge may impose are greatly disfavored” and courts “usually bend over backward to decide cases on the merits.”). See also *supra* note 214.

226. *Cf. Rhee*, *supra* note 5, at 540 (discussing the capacity of parties to offer a “bond of good faith [by] the assumption of a higher standard of proof” and maintaining that the “bond

To illustrate consider the following. A strong defendant plans to signal her strength by waiving a preliminary, statute-of-limitations defense. The Federal Rules of Civil Procedure hold that this defense must be raised by the defendant at an early stage—within her answer to the plaintiff’s complaint.²²⁷ Accordingly, an answer that fails to raise a statute of limitations defense should indicate to the plaintiff that the defendant implicitly waived the defense. However, this strict rule is subject to the generally permissive approach that the Rules embrace. Rule 15(a), which governs the issue of amendments to pleadings, allows defendants to raise arguments tardily, notwithstanding the rival’s opposition, “when justice so requires.”²²⁸ This liberal approach neuters the informative value of implicit waivers of this type.

In response, more sophisticated parties can explicitly commit not to raise certain claims. However, such contracts can be more complicated to draft. More importantly, it seems that even explicit commitments will not be respected—as courts will again tend to allow parties, at least in certain cases, permission to amend pleadings. Accordingly, scholars lamented that “[t]he current rules provide no reliable mechanism for parties to assure themselves early on that the scope of litigation has been (and will remain) contained.”²²⁹ This permissive approach prevents litigants from committing to “lash themselves to the mast”²³⁰ and frustrates signaling. Indeed, while litigants are presumably interested in committing not to raise new claims,²³¹ it is hard to find cases in which parties explicitly contracted to waive their right to amend.²³²

Rule 15 and the liberal approach to tardy amendments reflect a more general tendency to allow aggrieved litigants to deviate from procedural agreements.²³³ This approach has merits, as it assigns greater

is useless if it can be canceled [later]”).

227. See FED. R. CIV. P. 8(c)(1).

228. FED. R. CIV. P. 15(a)(2).

229. Moffitt, *supra* note 194, at 468; see also 83 C.J.S. *Stipulations* § 60 (2016) (“A stipulation not to amend a pleading . . . does not prevent the court from granting an amendment at the trial in the furtherance of justice.”); Paulson, *supra* note 201, at 524 (“courts regularly allow parties to avoid stipulations they make at pretrial conferences based on changed circumstances and fairness.”).

230. Moffitt, *supra* note 194, at 471. The famous analogy is the mythical Odysseus, who tied himself to the mast in order to avoid being lured by the seductive call of the sirens. *Id.*

231. *E.g. id.* at 468 (interviewing a litigator).

232. We looked through Westlaw for stipulations not to amend and found no such cases (we tried several search commands including for example: (agree! stipulat!)/s “not to amend”) /p (pleading! answer)). Of course, it may be that there are procedural agreements not to amend—perhaps our search did not find them, and/or courts are not faced with the need to decide these stipulations. However, the absence of case law at the least suggests that such agreements are not prevalent.

233. See Moffitt, *supra* note 194, at 471 (discussing another notable example, “grant[ing]

weight to fairness at the expense of strict, technical pleading.²³⁴ However, it is destructive to litigation signals. Our perspective, then, highlights the overlooked, subtle benefits that strict procedures entail.

The analysis in this Article therefore suggests a more nuanced application of Rule 15(a). Currently, courts have interpreted it broadly, refusing to grant leave to amend only in extreme circumstances.²³⁵ In particular, the current inquiry focuses on the plaintiff-defendant pair, asking whether the party who wishes to amend harms the opposing party.²³⁶ The litigation signals perspective, in contrast, looks at the different groups of informed parties. Late amendments enable an informed negligent doctor to mask the weakness of her case and blend a truthful message that a careful doctor could have sent. The possibility of late amendments, then, creates uncertainty and prevents plaintiffs from settling with those who chose to genuinely waive important defenses. Particularly, courts should be suspicious of tardy assertions when there are asymmetries of information in the background. Likewise, renegeing on implicit waivers, which serve as unilateral signals,²³⁷ is particularly suspicious where the costs are high relative to the stakes.²³⁸

By the same logic, our Article provides an argument in favor of maintaining rigid deadlines. To illustrate, consider the rule that allows defendants thirty days to remove a case from a state to a federal forum.²³⁹ To the extent that this deadline is strictly enforced, the plaintiff can presume on the thirty-first day that the defendant waived its right to litigate in a federal court. To the extent this waiver signals information, a settlement can be agreed upon immediately after the deadline passed. Courts that interpret the thirty-days limit flexibly, to allow removals later on, delay the realization of signaling-induced settlements.²⁴⁰

a motion *by one litigant* to permit discovery beyond that which was mutually negotiated.”).

234. *E.g.*, RICHARD L. MARCUS ET AL., *CIVIL PROCEDURE: A MODERN APPROACH* 245 (6th ed. 2013); *see also supra* note 216 and accompanying text.

235. *E.g.*, *Foman v. Davis*, 371 U.S. 178, 182 (1962) (“In the absence of any apparent or declared reason—such as undue delay, bad faith or dilatory motive . . . —the leave sought should, as the rules require, be freely given.”). *See also* 6 CHARLES ALAN WRIGHT, ARTHUR R. MILLER & MARY KAY KANE, *FEDERAL PRACTICE AND PROCEDURE* §1479 (3d ed. 2010).

236. Courts ask whether the opposing party “was taken by unfair surprise and prejudiced by the delayed assertion.” *S. Wallace Edwards & Sons, Inc. v. Cincinnati Ins. Co.*, 353 F.3d 367, 373–74 (4th Cir. 2003). Another factor is “the bad faith of the moving party.” *O’Connell v. Hyatt Hotels of Puerto Rico*, 357 F.3d 152, 155 (1st Cir. 2004); *see generally Foman*, 371 U.S. 178 at 182.

237. If the signal were cooperative the parties would presumably agree, through an explicit stipulation, to disregard the claim.

238. Recall that a pre-requisite to unilateral signals is that litigation expenses are at least half of the expected judgment. *See supra* Part III.A.2.

239. 28 U.S.C. § 1446(b)(1).

240. *Cf. Roth v. CHA Hollywood Med. Ctr., L.P.*, 720 F.3d 1121 (9th Cir. 2013) (deciding

c. Bargaining Chips

Sometimes parties use “bargaining chips,” i.e., valid claims or defenses that are raised and then dropped with the intention to settle. Bargaining chips are a potential signaling tool. However, courts can be hostile to such litigation maneuvers.

The following actual example, *Adams v. United Services Automobile Ass’n*, is illustrative.²⁴¹ The plaintiffs in *Adams* brought a class action against their insurer in a state court. The insurer removed the case to a federal court, a more favorable forum for defendants.²⁴² The case was then stayed in order to allow the parties to reach a settlement.²⁴³ After protracted settlement negotiations the insurer agreed to dismiss the federal proceedings²⁴⁴—or, in the foregoing terminology, it dropped its right to litigate in a more favorable forum. Concurrently, the parties went back to the state court and settled.²⁴⁵ This description fits a litigation signal that is based on dropping a procedural right—resulting in an early settlement that saved the need to conduct costly discovery and trial.²⁴⁶

Of course, there may well be alternative readings. As is typical in class litigation, once the parties reach a settlement they presumably prefer a more lenient forum—a state court, in that case.²⁴⁷ However, the parties could have avoided strict scrutiny of future settlements by staying in a state court. The fact that a defendant removes a case to a federal forum—and then agrees to return to a state court—is at least somewhat

in favor of a flexible rule regarding the 30-day deadline while recognizing that “defendants may sometimes be able to delay filing a notice of removal until it is strategically advantageous to do so.” *Id.* at 1126).

241. *Adams v. United Services Automobile Ass’n*, No. 2:14-cv-02013, slip op. at 2 (W.D. Ark. April 14, 2016) [hereinafter *Adams*, April 2016 Order]. For a discussion of this case see Jacqueline Matthews, *Sanctions Imposed on Five Attorneys for Class Settlement Forum Shopping*, CLASS ACTION LAWSUIT DEFENSE (Aug. 15, 2016), <http://www.classactionlawsuitdefense.com/2016/08/15/sanctions-imposed-on-five-attorneys-for-class-settlement-forum-shopping/>.

242. The defendant removed the case to a federal court following the Class Action Fairness Act of 2005 (CAFA). *Adams*, April 2016 Order, *supra* note 232, at *2. CAFA’s removal rules were enacted to enable defendants in certain class actions to avoid state courts, which “were viewed as less friendly to defendants than federal courts.” ROBERT H. KLONOFF, CLASS ACTIONS AND OTHER MULTI-PARTY LITIGATION IN A NUTSHELL 248 (4th ed. 2012).

243. *Adams*, April 2016 Order, *supra* note 232.

244. *Id.* at *2–4.

245. *Adams v. United Services Automobile Ass’n*, No. 2:14-cv-02013 (W.D. Ark. Dec. 21, 2015) [hereinafter *Adams*, Dec. 2015 Order].

246. The circumstances suggest that this is a cooperative signal—the dismissal from the federal docket was negotiated as part of the mediation process that gave birth to the substantive settlement. *Adams*, April 2016 Order, *supra* note 232, at 1–2.

247. *Id.* at 6 (“Arkansas courts [where the case was originally filed] do not undertake a rigorous analysis of whether the class certification requirements are met”).

puzzling.²⁴⁸ The litigation signals approach can explain why defendants create a temporary litigation advantage and drop it later, without an apparent change in the surrounding circumstances.²⁴⁹ Importantly, it seems that dropping federal jurisdiction was essential to reaching a settlement.²⁵⁰

The federal court in *Adams*, though, denounced this tactic as an “abuse of process in using [the federal court] as a bargaining chip,” an “inappropriate procedural gamesmanship with no intent to actually litigate claims in good faith.”²⁵¹ The federal judge’s dissatisfaction is understandable. Apparently, the defendant *did* use the federal court’s jurisdiction “as a bargaining chip.” However, from the litigation signals perspective this strategy is useful for the defendant to convey information to the plaintiff and achieve an early settlement. While the federal judge may have had other, good reasons to condemn the behavior of the attorneys,²⁵² this story demonstrates how the litigation signals approach can shed a different light on various litigation maneuvers.

d. Anti-gambling Provisions

Finally, we note that similar notions of “gamesmanship” can hamper litigation signals in other ways. In particular, multipliers on the judgment (Hypotheticals III-V) are wagers, as the informed party “doubles down.”²⁵³ As a result, the use of explicit monetary commitments as litigation signals seems to be vulnerable to anti-gambling provisions.²⁵⁴

Several courts have found that third-party investment in litigation,

248. For a similar practice in other cases see *id.* at 28–29.

249. The reader may wonder whether a similar signal could have been accomplished by a statement of the defendant in which it commits to never remove the case to a federal court. We suspect, though, that such a statement would not constitute a credible commitment as courts would allow the defendant to renege and remove the case later on. *See* the discussion on renegeing and credible commitments, *supra* Part IV.B.2.b.

250. The parties “engaged in protracted settlement negotiations” for more than a year. *Adams v. United Services Automobile Ass’n*, No. 2:14-cv-02013 (W.D. Ark. August 3, 2016) [hereinafter: *Adams*, August 2016 Order].

251. *Adams*, Dec. 2015 Order, *supra* note 236, at 5, 6.

252. We acknowledge that the act of removing to a federal forum and dismissing thereafter wastes the federal court’s resources—and it may therefore be wise to sanction the attorneys. The judge indeed found that some of the attorneys violated Rule 11 of the Federal Rules of Civil Procedure. *Adams*, August 2016 Order, *supra* note 241. However, as the case required little judicial attention while it was pending, it is plausible to think that the costs the parties inflicted on the federal judiciary were not considerably large.

253. *Cf.* Prescott & Spier, *supra* note 13, at 78 (predicting situations in which “litigants will prefer to increase their bets, literally hoping to double down.”).

254. *Cf.* Donohue, *supra* note 61, at 1111 (discussing a similar argument with regard to stipulations to use a loser-pays rule).

in exchange for a sum contingent on the outcome, constitutes unlawful gambling—“a bet by which two parties agree that a certain sum . . . should be paid . . . on the happening . . . of an uncertain event.”²⁵⁵ In addition, several states explicitly criminalize “bet[ting] on result of trial.”²⁵⁶ This logic renders multiplier provisions unlawful.²⁵⁷ These legal concerns may be the reason why explicit monetary commitments, as opposed to other signaling techniques such as waiving defenses, are uncommon.²⁵⁸

Like other litigation maneuvers, the litigation signals approach sheds a different light on such “bets.” A deeper understanding of the utility of these tactics can thus dissipate legal concerns over judgment-contingent commitments.

C. Court Procedures

The previous discussion showed that some signaling mechanisms are frowned upon by courts, and that litigants do not fully achieve the benefits of private contracting. This state of affairs indicates that there is a considerable room for utilizing court-procedures to facilitate bargaining—and signaling—between the parties.²⁵⁹ In particular, the use of court-procedures can streamline third-party signals.

Third-party litigation signals are promises to spend a certain sum, in addition to the judgment, conditional on losing the case.²⁶⁰ Our analysis suggests that third-party signals may be the easiest to implement. Unlike cooperative signals, third-party signals require little

255. *Wilson v. Harris*, 688 So. 2d 265 (Ala. Civ. App. 1996) (internal quotation marks omitted). See generally Anthony J. Sebok, *Betting on Tort Suits After the Event: From Champerty to Insurance*, 60 DEPAUL L. REV. 453, 457–58 (2011) (exploring the argument that third-party investment in litigation constitutes illegal gambling).

256. FLA. STAT. ANN. § 849.14 (2016). A similar provision exists in California, CAL. PENAL CODE § 337a (2016).

257. Interestingly, baseball arbitration, which shares some similarities to litigation signals, *supra* notes 129-131 and accompanying text, “has been criticized for encouraging gamesmanship” and “as a form of legalized gambling.” Respectively, Elissa M. Meth, Note & Comment, *Final Offer Arbitration: A Model for Dispute Resolution in Domestic and International Disputes*, 10 AM. REV. INT’L ARB. 383, 410 (1999) (internal quotation marks omitted); Borris, *supra* note 131, at 315. Bottom-line negotiating, the mediation technique in which parties are asked to commit to pay a sum conditional on the final award, was also described as gambling. Young, *supra* note 133, at 21.

258. A related legal obstacle is the requirement of consideration. RESTATEMENT (SECOND) OF CONTRACTS § 71 (1981). This rule casts doubt on the ability to enforce unilateral, judgment-contingent signals. We thank Daniel Hemel for suggesting this point.

259. There is surprisingly little academic and practical interest in this issue. One exception is Gertner & Miller, *supra* note 27, who envision a process in which the court secretly receives offers from both sides to encourage parties to make truthful demands.

260. See our discussion in *supra* Part III.A.3.

cooperation between the parties.²⁶¹ Unlike unilateral signals, third party signals are more likely to be triggered by informed litigants as they entail no direct gain to the rival party.²⁶² However, third-party signals require the uninformed plaintiff to believe that the defendant's promise to spend the money, upon losing the case, is credible.²⁶³ Mere promises to pay third parties or spend money can be meaningless, from the plaintiff's perspective. Obligations that are more trustworthy presumably necessitate more elaborate and costly devices. A simple and effective solution is using the court—by allowing the defendant to deposit the additional sum with the court clerk, to be paid into the court funds should the defendant lose the case.

Rigid obligations, as opposed to mere promises, allow the uninformed litigant to better trust the message that its informed rival sends. While we are unaware of court procedures that enable litigants to commit to pay an additional sum, contingent on a judgment against them, this simple mechanism can facilitate the flow of information between the parties.²⁶⁴

CONCLUDING REMARKS—A CALL FOR LITIGATION SIGNALS

This Article illustrates how litigants can transmit information credibly in asymmetric information situations through a variety of litigation maneuvers—“litigation signals.” Some of these techniques are less common, for example monetary commitments to pay upon losing. Others, such as fee-shifting provisions, waiving claims and defenses, and award-modification agreements, are more frequent.

The capacity of litigants to convey information credibly by various means has a variety of implications. In general, litigation signals are beneficial as they facilitate the flow of information between the parties and encourage settlements.²⁶⁵ In particular, the use of litigation signals

261. See the comparison of the different litigation signals, in the Table that follows *supra* note 121.

262. See *supra* Part III.A.3.

263. Cf. *supra* Part IV.B.2.b (identifying a similar problem in the context of commitments to waive claims and defenses). Relatedly, donations to third-parties could indirectly benefit the defendant, again diluting the informative power of the signal.

264. Cf. *Campbell-Ewald Co. v. Gomez* 136 S. Ct. 663 (2016) (distinguishing, for Rule 68 purposes, between mere promises to pay and “actually deposit[ing] the full amount demanded.” *Id.* at 671); *Chen v. Allstate Ins. Co.*, 819 F.3d 1136 (9th Cir. 2016) (distinguishing, for Rule 68 purposes, between depositing the settlement amount in an escrow account and “deposit[ing] [the] money in court,” which “could be treated as the equivalent of an actual payment.” *Id.* at 1145 (internal quotation marks omitted)).

265. Litigation signals can have various ex-ante effects. On the one hand, signaling saves costly trials and hence dilutes the incentive of informed defendants to take care. On the other hand, signaling improves the position of careful defendants, the “good” types, relative to

can substitute for formal discovery, the goal of which is to compel information-sharing. Litigation signals also justify conferring freedom on parties to shape their procedures. Moreover, litigation signals stress the desirability of court procedures designed to facilitate negotiation.

In addition to highlighting the legal means through which litigation signals may be executed and their potential implications, this Article seeks a better understanding of the mechanics of such signals. Litigation signals can be based on obligations to the plaintiff or a third party and they can require different levels of cooperation between the parties. Accordingly, we classified litigation signals into three groups—the simpler unilateral signals; third-party signals; and the more complicated cooperative signals, in which both parties are directly involved. While simple forms of signals may not be useful, more effective tools require greater sophistication.

We expect parties in asymmetric information situations to signal information, at least to some extent. We provide empirical evidence that corroborates the assertion that litigants signal through simple, non-monetary means such as procedural concessions. However, beyond limited examples in the context of arbitration and mediation, we do not observe the most straightforward litigation signals—i.e., monetary commitments to pay an additional sum, conditioned on losing the case. There may be several reasons why litigation signals in general, and monetary commitments in particular, are not used more widely. Transaction costs and a discouraging legal environment can frustrate the inclination to use signals. Monetary commitments are particularly vulnerable. They can be inhibited by anti-gambling norms,²⁶⁶ and restrictive ethics rules that make it harder for lawyers to commit to monetary rewards.²⁶⁷

Notwithstanding these restrictions, we conjecture that a major issue is the lack of innovation in the legal market.²⁶⁸ In this sense, our Article serves as a call for greater use of innovative settlement provisions.²⁶⁹ It

negligent ones. Analyzing these effects is beyond the scope of this Article. *Cf.* Ivan P. L. P'ng, *Litigation, Liability and Incentives for Care*, 34 J. PUB. ECON. 61 (1987) (analyzing the ex-ante implications of loser-pays rules along these lines); Prescott & Spier, *supra* note 13, at 138–41 (briefly discussing the broader, ambiguous welfare implications of partial settlements and high-low agreements).

266. *See supra* Part IV.B.2.d.

267. *See supra* note 144 and accompanying text. Another possible concern is that, if settlement negotiations fail, the monetary commitment could be revealed, affecting the decision-maker. *Cf.* Prescott & Spier, *supra* note 13, at 131 n.296 (discussing a similar issue in the context of award-modification agreements).

268. This point was also raised in interviews that we conducted with practicing attorneys.

269. We thus join Prescott and Spier, *supra* note 13, who maintain that “One would hope that litigants (or their attorneys) would be exploring innovative forms of partial settlement as

is not a novel proposition that the legal market suffers from agency problems²⁷⁰ and inefficiencies,²⁷¹ resulting in a dearth of innovation.²⁷² In general, “the homogeneous nature of the legal profession” mutes and limits “[i]nnovations in dispute resolution.”²⁷³ Existing practices are entrenched, and new, innovative practices often require exogenous “shocks,” such as “changes in legal interpretations of terms, or technological advances.”²⁷⁴ In the absence of such shocks existing practices prevail.

A striking example may be seen in the gap between the theory on customized procedures and current practices. Numerous commentators have pointed to the benefits of customized litigation.²⁷⁵ Nonetheless, litigants and their lawyers do not seem to fully tap the benefits of tailor-made procedures. Several scholars who have explored procedural customization in depth conclude that it is far from being prevalent. Michael Moffitt asserts that, with respect to post-dispute agreements, “most customization within the rules is relatively modest.”²⁷⁶ Similarly, others conclude that post-dispute “agreements are necessarily rare or almost trivial.”²⁷⁷ David Hoffman, who examines empirically pre-dispute contracts, describes a similar view. Other than specific modifications, “parties almost never use contract terms to vary their

a matter of course, given the gains these arrangements can offer.” *Id.* at 79–80 (footnote omitted).

270. See generally Larry E. Ribstein, *Ethical Rules, Agency Costs, and Law Firm Structure*, 84 VA. L. REV. 1707 (1998).

271. See, e.g., Eisenberg & Miller, *supra* note 58, at 375 (asserting that “no obvious market process exists that would drive out less efficient clauses”).

272. In one influential empirical study, for example, John Coates concluded that one should “blame the lawyers” for sub-optimal takeover defense provisions. John C. Coates IV, *Explaining Variation in Takeover Defenses: Blame the Lawyers*, 89 CAL. L. REV. 1301 (2001). This does not mean that there are no legal innovations. Martin Lipton, for instance, has famously devised the takeover defense known as “poison pill.” Lynn A. Stout, *Takeovers in the Ivory Tower: How Academics Are Learning Martin Lipton May Be Right*, 60 BUS. LAW. 1435 (2005). It seems, though, that such innovations are fairly uncommon.

273. Gillian K. Hadfield, *The Price of Law: How the Market for Lawyers Distorts the Justice System*, 98 MICH. L. REV. 953, 993–94 (2000). The legal profession is homogenous because it “defines and reproduces itself.” *Id.* at 993.

274. Hoffman, *supra* note 149, at 426 (internal quotation marks omitted).

275. See *supra* notes 191–93 and accompanying text (discussing the benefits of party rulemaking); Hoffman, *supra* note 149, at 391–93 (surveying relevant literature).

276. Moffitt, *supra* note 194, at 495.

277. Prescott & Spier, *supra* note 13, at 85 (describing “the general assumption” among “contract-procedure authors.”). See also Bone, *Party Rulemaking*, *supra* note 89, at 1342 (“I found very few examples of agreements entered into after filing, other than the usual stipulations for additional time and the like.”); Donohue, *supra* note 61 (predicting that parties should stipulate over the default fee-shifting rule, but finding no such post-dispute stipulations. *Id.* at 1110 & n.38).

post-dispute procedural contests.²⁷⁸ Robert Bone concludes that although “[p]arties can benefit from modifying procedural rules in a variety of different ways both before and after a lawsuit is filed,” his survey of cases yields “only a limited range of party rulemaking.”²⁷⁹ Notwithstanding the theoretical predictions, then, “the procedural dog . . . has not barked.”²⁸⁰ While a restrictive judicial attitude toward customized procedures can partly explain this reality,²⁸¹ there seems to be a clear link between the inefficiencies of the legal market and the lack of valuable party rulemaking.²⁸²

These lessons pertain to litigation signals. If litigants do not regularly customize litigation, “even in circumstances where we would expect them to,”²⁸³ then we should not be surprised if they do not employ the more sophisticated forms of litigation signals to their full extent.

In summary, while we show that litigation signals can be useful, in practice their precise scope is not clear and future investigation would be able to better specify their actual role. While litigants do seem to employ primitive forms of signaling, the use of more developed forms is currently circumscribed. Given the inefficiencies in the legal market in general, and the lack of innovation concerning procedural contracts in particular, it is not surprising that parties do not fully realize the benefits of litigation signals. At minimum, we hope that our Article will provoke further thought about these issues, among academics and practitioners alike.

278. Hoffman, *supra* note 149, at 394. Notable exceptions, in which there exists “some use” of contractual modifications of procedure include forum selection, choice of law, attorney’s fees, and jury trial waivers. *Id.* at 424.

279. Bone, *Party Rulemaking*, *supra* note 89, at 1351.

280. Hoffman, *supra* note 149, at 394.

281. See *supra* notes 201–08 and accompanying text.

282. For a detailed discussion along these lines see Hoffman, *supra* note 149.

283. Hoffman, *supra* note 149, at 394.