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Symmetrical and
Asymmetrical
Approaches to
Non-Cooperative
Bargaining

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Abstract

Where two parties are involved in a dispute or bargaining process with respect to an amount of money, game theoretic studies of “*sealed-bid mechanisms*” suggest that both parties would in many instances be better off if they were to agree to enter into a symmetrical arrangement whereby each could confidentially propose a number to a neutral party, who could then compare those numbers to see whether they matched or crossed (in which event the matter would be resolved). Yet those same studies note that there are several problems with such arrangements that interfere with the ability of rational parties to use them effectively in real-world bargaining contexts. This paper (a) considers the extent to which those problems are attributable to the symmetrical structure of such arrangements, (b) demonstrates that systems used by bargainers do not have to be symmetrical in order to be fair and useful, and (c) introduces an asymmetrical arrangement that does not give rise to such problems, and that allows forces akin to those that drive “*buy-sell mechanisms*”—which have been shown to have great power within the context of bargaining over divisions of jointly owned property—to be unilaterally unleashed and applied within the context of bargaining over a monetary term.

Key Words: Bargaining, Uncertainty, Litigation, Settlement, Sealed-Bid Mechanisms, Buy-Sell Mechanisms, Escrow Mechanisms, Legal Malpractice, Mechanism Design.

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Summary of the Paper

This paper uses as a starting point a 1995 article by Gertner and Miller.¹ That article, like many other theoretical and experimental papers published over the past several decades, provides a game theoretic analysis of a symmetrical, bilateral bargaining arrangement under which each party confidentially proposes a number to a neutral party, who then compares those numbers and announces a settlement in the event that the numbers match or cross (such arrangements are commonly referred to by economists as “*sealed-bid mechanisms*”). The 1995 article focused on the possible use of such an arrangement by adversaries involved in civil court actions and demonstrated the theoretical utility of such use, but also identified several problems with such arrangements that limit their effective use by rational parties involved in real-world litigation. The 1995 article suggests that some of those problems could be overcome if such an arrangement was formally incorporated into the court system, allowing parties to use it without first having to enter into an interim agreement with the other side, thereby allowing each party to use it without fear of appearing “*weak*.”

Section I of the current paper describes the arrangement in question, discusses the historical background of such arrangements, and briefly reviews the theoretical and experimental work showing that such arrangements hold great promise. This section then briefly notes the symmetrical structure of such arrangements, reviews the problems with real-world usage of such arrangements, including the problems identified in the 1995 article, and suggests that the source of those problems may be found within that symmetrical structure.

Section II of this paper demonstrates that arrangements used within the context of non-cooperative bargaining relationships do not have to be symmetrical in order to be fair and effective, citing certain asymmetrical features of a bargaining arrangement that has been proven to be highly effective within a different real-world bargaining context: the so-called “*buy-sell mechanism*” that

¹ Gertner, R. and Miller, G., Settlement Escrows, *Journal of Legal Studies*, Vol. 24, Issue 1, p. 87-122 (1995).

is commonly used to resolve disputes over the division of jointly owned property. This section of the paper also considers the extent to which parties involved in non-cooperative bargaining over a monetary term, such as parties who are involved in a civil action for monetary damages, are in a position that is analogous to the position of joint owners of property who are involved in a deadlock or other dysfunctional relationship.

Section III of the paper compares and contrasts the symmetrical features of sealed-bid arrangements with the asymmetrical features of buy-sell arrangements, and introduces an asymmetrical escrow arrangement that can be used within the context of non-cooperative bargaining over a monetary term (a summary of which appears at page 24). This section of the paper shows that the problems associated with real-world usage of sealed-bid arrangements would not be encountered, and that the ability of rational parties to engage in efficient bargaining in a dispute over a monetary term would be substantially enhanced, if one of the parties were to unilaterally initiate the use of an asymmetrical escrow system.

Section IV of this paper consists of the “*Conclusion*,” which notes that an asymmetrical escrow system can be used to regulate and resolve conflict in a wide variety of contexts, including conflicts over issues that do not involve monetary terms, and conflicts taking place outside of a court system. The extent to which the principles underlying the asymmetrical approach are analogous to certain principles recognized in strategic and epistemological studies is also briefly referenced, as are some of the potential implications for bargaining mechanism design. Appendix I consists of a one page comparison of certain features of the three arrangements discussed in the paper. *

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I. Analysis of a Symmetrical Approach to Bargaining over a Monetary Term

IN 1995, Dr. Robert H. Gertner and Dr. Geoffrey P. Miller of the University of Chicago authored a paper entitled Settlement Escrows, *Journal of Legal Studies*, Vol. 24, Issue 1, p. 87-122 (1995) (hereinafter referred to as “the 1995 article”).² The 1995 article, in turn, formed the basis for an experimental study conducted by Dr. Linda Babcock of Carnegie Mellon and Dr. Claudia Landeo of the University of Alberta entitled Settlement Escrows: a Study of a Bilateral Bargaining Game, *Journal of Economic Behavior and Organization*, Vol. 53, No. 3, pp. 401-417 (2004) (hereinafter referred to as “the Babcock/Landao study”). The 1995 article described a sealed-bid arrangement that could be used as a dispute resolution mechanism. The Babcock/Landao study demonstrated that the arrangement described in the 1995 article was capable of producing remarkable and highly beneficial results within the context of an experimental setting, as discussed *infra* at pp. 4-5.

I.1 Summary of the Symmetrical Arrangement Considered in the 1995 Article

The 1995 article analyzes, both from a game theoretic perspective and from a practical perspective, the positive and negative features of the sealed-bid arrangement described therein. This is described as:

“an arrangement whereby an agent stands ready to receive cash settlement offers from the parties to a lawsuit. If the agent receives offers which cross — if the defendant offers more to settle than the plaintiff demands — the court imposes a settlement at the midpoint of the offers. Absent settlement, the agent maintains absolute secrecy about the size of the offers received, or even the fact that an offer has been made.”

(The 1995 article, at p. 1).

² As of the date upon which this paper was written, a copy of the 1995 article was available on-line at: http://www.law.uchicago.edu/Lawecon/WkngPprs_01-25/25.Miller.Escrows.pdf. Citations to specific pages of the 1995 article that appear within this paper refer to the pages as they appear within that PDF version.

A party has the option of not submitting any offer at all, or of submitting a completely unrealistic offer (which, as the authors note, is the “*strategic equivalent*” of submitting no offer at all). (*Id.*, at p. 21).

The 1995 article provides compelling analysis and extensive mathematical proofs concerning the theoretical efficacy of such arrangements, supporting a finding that they are:

“...*potentially beneficial because they permit parties to make reasonable settlement offers, the secrecy of which ... reduces... the adverse inferences about the strength of the offeror’s case that the offeree can draw from a reasonable offer.*”

(*Id.*, at p. 1).

1.2 Background of Symmetrical Arrangements such as that described in the Article

Sealed-bid arrangements have been used by trial judges to try to effect settlements on the eve of trial for at least several decades, and the potential efficacy of such arrangements (as well as the fact that such an arrangement could be embodied in and carried out by a computer) was noted by Schelling as long ago as 1960. (See, in this regard, Schelling, Thomas C., *The Strategy of Conflict* (Cambridge: Harvard Press) (1960), at pp. 144-145). Such arrangements have also been, as is noted within the 1995 article, the subject of a number of earlier game theoretic articles.³

1.3 Theoretical and Experimental Support for such Arrangements

The 1995 article, together with the subsequent Babcock/Landeo study and the numerous other articles referenced above, provide strong support for the

³ The most often cited articles within this area would include: Chatterjee, K. and Samuelson, W., *Bargaining Under Incomplete Information*, 31 *Operations Research* 833 (1983); Myerson, R. and Satterthwaite, M., *Efficient Mechanisms for Bilateral Trading*, 29 *Journal of Economic Theory* 265 (1983); Leininger, W., Linhart, P.B. and Radner, R., *Equilibria of the Sealed-Bid Mechanism for Bargaining with Incomplete Information*, *Journal of Economic Theory*, 48, 63-106 (1989); and Satterthwaite, M. and Williams, S.R., *Bilateral Trade with the Sealed Bid k-Double Auction: Existence and Inefficiency*, *Journal of Economic Theory* 48, 107-133 (1989). (Citations to numerous other articles discussing these sorts of arrangements may be found in Schotter, A., *Bad and Good News about the Sealed-Bid Mechanism: Some Experimental Results*, *American Economic Association Papers and Proceedings*, 80, 220-226 (1990)).

proposition that two adversarial parties involved in litigation over a monetary amount would in many cases both be better off if they entered into an interim agreement allowing them to use a sealed-bid mechanism as described in the 1995 article. For example, within the Babcock/Landau study, and consistent with the approach ultimately recommended in the 1995 article (discussed *infra* at pp. 9- 10), certain test subjects were allowed to use a sealed-bid mechanism when they arrived at certain precipices (*i.e.*, stages of the experiment where each faced further costs if a bargained solution was not achieved). Test subjects using the sealed-bid mechanism achieved bargained solutions 69% of the time, as opposed to a 49% rate for test subjects who used traditional bargaining, and had litigation costs that were 37% lower. (*See*, in this regard, the Babcock/Landau study at pages 409-410). Moreover, as was noted within the 1995 article, this sort of arrangement does not, in theory and in experimental contexts, simply increase settlements and reduce costs. It “generally leads to... payoffs that are more in line with the underlying merits of the case....” (the 1995 article, at p. 28).⁴

I.4 Symmetrical Nature of the Arrangement described in the 1995 Article

The sealed-bid arrangement discussed in the 1995 article is, as that article makes clear, a number comparison arrangement that can be used as an “*alternative dispute resolution mechanism*” (the 1995 article, at pp. 39-40), similar to arbitration and mediation. As is the case with all such systems, the arrangement is “*symmetrical*” in the sense that it is structured so as to allow each party to interact with it in precisely the same manner as the other side. Thus, for example, neither party can use it unless both parties have entered into a prior, interim agreement allowing them to do so (or, as proposed in the article, both have been allowed to use it via a court rule — which would also place the parties in a symmetrical position). Similarly, each party stands in a position that is a “*mirror image*” of the other’s in the sense that each has equal say (or, alternatively, no say) on certain documentation issues (as discussed *infra* at pp. 9-10), and each has their use of the system limited (as discussed *infra* at pp. 8-10) to the exact same

⁴ In this regard it will be appreciated that, although the 1995 article and the Babcock/Landau study are relatively narrow in focus, they provide substantial support for the broader proposition that “*justice may be rationally supplied by selfish individuals because justice is a criterion for selecting among equilibria of a game.... [T]his is perhaps just an amplifying echo of Thomas Schelling’s The Strategy of Conflict which, in Chapter 3, introduced the idea of focal coordination in games with multiple equilibria. The main point... may simply be the observation that Schelling’s focal-point effect needs to be understood as one of the great fundamental ideas of social philosophy.*” Myerson, Roger, Justice, Institutions, and Multiple Equilibria, Working Paper, Economics, University of Chicago (2005).

number of “*rounds*.”⁵ With this background in mind, we now turn to a consideration of certain problems identified in the 1995 article, and to some underlying problems that were not explicitly addressed in that article.

1.5 The Signaling Problem Described in the 1995 Article

The 1995 article identifies several problems with the use of sealed-bid mechanisms that prevent them from working, or working effectively, in real-world contexts (each of which is, as previously noted, attributed within this paper to certain symmetrical aspects of those arrangements). One such problem arises out of the fact that, as noted above, such an arrangement cannot be used by either party unless both parties have entered into a prior, interim agreement allowing them to do so. As is noted at page 38 of the 1995 article, rational parties will be unwilling to propose, or agree to a proposal, to enter into an interim agreement to use such an arrangement because each party will be legitimately concerned that, if he or she does so:

“... his adversary may infer that the offeror’s case is weak. Therefore, neither party will suggest a settlement escrow, despite the fact that each would be better off if the settlement escrow was forced upon them.”

This problem is, in a larger sense, the same problem that is inherent in all bargaining and in all alternative dispute resolution systems. For example, a party who proposes, or who agrees to a proposal by his adversary, to enter into a mediation process is implicitly conceding a willingness to consider compromise, which may simply serve to cause the other party’s position to move in an adverse

⁵ It should be noted that the shorthand expression that the authors of the 1995 article use to refer to those “*rounds*” of bargaining (*i.e.*, “*settlement escrows*”) has a capacity to create confusion. The word “*escrow*” is a noun, and is defined as a “*a deed, bond, or other written engagement delivered to a third person, to be delivered by him to the grantee only upon the performance or fulfillment of some condition.*” (Webster’s New Collegiate Dictionary, 2nd Ed.) The agent referred to in the 1995 article is holding a set of numbers (numbers that have been deposited with the agent by *both* parties) that the agent has been asked to compare in a “*round*.” The object that is ultimately being sought (in this case by *both* of the parties) is a settlement agreement that would, depending upon the results of the comparison, arise out of an interim agreement between the parties or an order or rule of a court. For these and other reasons, the 1995 article’s use of the term “*escrow*” in referring to the various rounds (as when the article refers to “*the first escrow*” or to “*multiple settlement escrows*”) has a capacity to create confusion, and appears to involve what Black’s Law Dictionary, in its definition of the word “*escrow*,” has criticized as an increasingly common “*perversion of the term.*”, Black’s Law Dictionary, 4th Ed (St. Paul MN: West Publishing, Co.) (1968) at p. 641.

direction, and to harden.⁶ This is why mediation systems are typically not used, or used effectively, until the parties are on the eve of trial.

The 1995 article proposes that, given this problem, and given the fact that the utility of sealed-bid mechanisms is evident from the game theoretic analysis, such an arrangement should, effectively, be “*forced upon*” the parties by being formally incorporated into the legal system. More specifically, the article proposes that the rules of civil procedure that govern all civil court cases should be amended in certain ways so as to allow anyone involved in such a case to initiate the use of such an arrangement, with the Clerk of Court serving as the administrative agent.⁷

I.6 The Related Problem of Documentation, as Described in the 1995 Article

The 1995 article acknowledges that, if the parties are put in a position where they could utilize the arrangement by some means other than via an interim agreement between the parties (such as by an order or rule of a court), this would, while solving the “*signaling of weakness*” problem described in the preceding section, give rise to another problem: if two parties used the arrangement without having first entered into an interim agreement to do so and submitted numbers that matched or crossed, what would be the form of the agreement that the resulting, agreed-upon number would then be incorporated into? While it is possible that the parties might be able, *ex-post*, to work out between themselves what the settlement agreement should say on collateral issues (such as, for example, confidentiality, applicable law, remedies in the event of a breach, etc.), what happens if one of the parties insists on a contractual term that the other side is unwilling to

⁶ See, e.g., Schelling, Thomas C., The Strategy of Conflict (Cambridge, Mass.: Harvard Press) (1960), at pp. 34-35. (“*If one reaches the point where concession is advisable, he has to recognize two effects: it puts him closer to his opponent’s position, and it affects his opponent’s estimate of his firmness. Concession not only may be construed as capitulation, it may mark a prior commitment as a fraud, and make the adversary skeptical of any new pretense at commitment....*”).

⁷ The 1995 article thus suggests that there are only two ways in which the parties can be placed in a position where they can use the arrangement in question: (a) through an interim agreement between the parties (which the article suggests will not happen because neither party will want to look “*weak*”), or (b) by making changes to the court system so that everyone using the court system finds themselves in such a position (which has not happened and, even if it did, would be of no use in disputes taking place outside of that court system). The inability of a party to use such an arrangement without the consent of the other side or the assistance of a court is one of several problems that distinguish symmetrical arrangements such as the one described in the 1995 article from the asymmetrical arrangements discussed *infra* at Section II and Section III of this paper.

agree to? Under such circumstances, a party may find that the number that he submitted “*in confidence*” and that was then disclosed because it matched or “*crossed*” with a number submitted by the other side has not produced a settlement, but has instead simply become a starting point from which his adversary will try to extract further concessions.

The solution to this problem that is proposed within the 1995 article involves, again, an appeal to intervention by a sovereign power. If the parties were unable to agree upon the terms, the terms could be selected by the court. (*Id.*, at pp. 35-36). Since the rigidity of this proposed solution might itself dissuade some parties from using the arrangement, the 1995 article suggests that the court system could allow each party to select, from a series of alternative forms, the form that that party would prefer to use, and the court system could then select and impose the one that appeared to best reflect the respective intentions of the parties. (*Id.*, at page 35.)⁸

1.7 The Problems with Single Rounds and Multiple Rounds, as Described in the 1995 Article

Another problem identified in the 1995 article, which is both practical and game theoretic and which the article describes as perhaps the most intellectually interesting problem addressed therein, concerns the timing, and the number of occasions, upon which the parties should be permitted to submit settlement offers to the “*agent*” under the arrangement in question. The problem, as stated at page 34 of the article, is as follows:

⁸ The asymmetrical arrangements discussed in Sections II and III of this paper take a different approach to addressing the issue of documentation. Under those arrangements, one party drafts the forms into which the monetary term would be inserted if an agreement was arrived at, binding himself to accept and be bound by all of those terms (both the monetary term and the terms relating to collateral issues such as confidentiality, applicable law, remedies in the event of a breach, etc.), subject only to his adversary’s acceptance of those same terms. It is respectfully submitted that such an approach is preferable to having the collateral terms selected by a court or other third party, because in almost all cases the parties themselves (and, specifically, their attorneys) will have more insight into what terms could be appropriately sought or granted by each party given the particular details of the underlying dispute or transaction. Obviously, if a party proffers collateral terms that his adversary could rationally reject, then the party proffering those terms will have provided his adversary with a rational basis for simply refusing to go forward, and a party drafting the collateral terms under an asymmetrical arrangement accordingly needs to take that into account in drafting those terms. In cases where the party drafting the collateral terms is uncertain as to what terms would be acceptable to the other side, the party who is doing the drafting can simply proffer a set of alternative proposals. *See generally*, with regard to the documentation issue and its relationship to Schelling’s concept of “*focal coordination*,” the discussion *infra* at pp. 20-21.

“From a theoretical viewpoint, the most interesting implementation issue may be how often offers... can be revised. If the litigants do not learn new information in the pre-trial stages, the answer is easy. There should be a single opportunity to make... offers and if the offers do not cross, there is no opportunity to try again. One way to think about this is to assume, to the contrary, that there is an opportunity for each side to revise its offer, should there be no settlement in the first [round]. Now, the incentives to make a reasonable offer in the first [round] are much weaker. A litigant may reason that it can make an aggressive offer in the first [round] in the hopes that it may settle anyway, and only make a reasonable offer in the second round....”

“Nonetheless, a benefit to multiple settlement [rounds] can arise if information is revealed through pre-trial proceedings. Information transfer will occur in discovery as parties learn about their adversaries’ private information through depositions and private documents. It may be valuable to allow parties who fail at an initial settlement [round] to try again after discovery. The cost of allowing the second settlement [round] is that it reduces the likelihood that the parties will settle in the first [round].”

“There is no way to establish the optimal number or timing of settlement [rounds] theoretically.”

(The 1995 article, at p. 34.)

In situations where the parties are endeavoring to enter into an interim agreement to use such an arrangement, the above-described problem concerning whether to use a single-round or multiple-round version of the arrangement would arise in their negotiations over the terms of the interim agreement. Since there are, as the 1995 article acknowledges, downsides to either approach, either party would have a rational basis for simply walking away from such negotiations. In situations where, as proposed within the 1995 article, the arrangement is going to be imposed upon the parties by a court, the problem of how many rounds to allow arises at the stage where the court imposed system is being designed. While the 1995 article notes that a “*single-round*” arrangement would put more pressure on a party to be reasonable at the time that the offer was made, the 1995 article concludes at page 35 that, in order to allow for additional rounds following the “*information exchange*” that takes place in discovery (which the article suggests might cause either or both parties to change their valuation), a multiple round system might be best:

“An obvious point is that settlement [rounds] should be set prior to stages which involve large costs and they should be separated by

periods of information acquisition. Natural points would be shortly after the filing of the case, just prior to discovery [i.e., the phase of litigation where depositions and document production takes place], and just prior to the trial.”

(The 1995 article, at p. 35.)⁹

I.8 The “Split-the-Difference” Feature as a Reflection of, Rather than a Remedy for, the Problems Underlying Arrangements as Described in the 1995 Article

Another symmetrical feature of sealed-bid mechanisms is that, if the numbers submitted by the respective parties in any given round “cross” (*i.e.*, if the plaintiff’s demand is less than the defendant’s offer), then the case settles at the midpoint between those two numbers (either pursuant to a preexisting agreement between the parties or under a rule of court). It will be observed that this feature serves a “housekeeping” purpose — as a practical matter, there needs to be some protocol in place to address what happens if and when the two numbers cross. In this section of the paper, we use a discussion of this feature as a starting point to illustrate some deeper problems underlying sealed-bid arrangements, problems that underlie all symmetrical approaches to non-cooperative bargaining.

Under sealed-bid arrangements such as the one described in the 1995 article, where a seller proposes that an object’s value (V) is a specific monetary amount (x) and a buyer proposes that the object’s value is a specific monetary amount (y), then, in all cases where x is less than y , the transaction takes place at an intermediate price ($(x + y) \times .50$) that is higher than what the seller proposed, and lower than what the buyer offered. For example, if $x = (y - 2)$, then a seller who proposes x receives an intermediate value (which can be expressed either as $x + 1$ or $y - 1$). Under such circumstances, the seller receives a price that is higher than the price that the seller proposed, but less than the price that the buyer would have willingly paid.

Under the classical definition of value (where value is defined as the price at which a willing seller and a willing buyer, acting without compulsion, would be willing to carry out the exchange), the value (V) would, under the above-described

⁹ The 1995 Article does not address the possibility of utilizing an asymmetrical arrangement that restricted one party to a single fixed position, while allowing the other party to make an indefinite series of confidential offers up to a fixed deadline. *See generally*, with regard to the utility of such an asymmetrical arrangement, the discussion *infra* at pp. 24-30.

circumstances, have effectively been defined as consisting of a multiplicity of numbers (*i.e.*, $V = x$, $V = y$, and V equals every number that is greater than x and less than y). Yet the supposition that V can simultaneously equal a multiplicity of numbers that are not equal to one another is (like the analogous supposition that underlies quantum theory) plainly paradoxical and thus potentially problematic and troublesome from the perspective of many real-world bargainers. This issue, and the classical definition of value, thus warrant some further consideration in the search for answers to the question posed at page 38 of the 1995 article: “*If [such bargaining arrangements] are so good, why don’t we see them already in [use]?*”

The classical definition of value referred to above is routinely applied by courts and by appraisers, and it is also entirely consistent with common sense and the manner in which people routinely arrive at valuations within the real world. For example, in cases where the consideration (*i.e.*, the thing of value) that is being sought or offered by one of the parties to a potential transaction is readily available on the open market (such as where it consists of a publicly traded stock or commodity), each party can look to what other willing buyers and sellers have done in the context of recent, comparable transactions within the relevant market and thereby find a value that meets that classical definition. They can then, in turn, rationally seek or grant such an outcome within their own specific bargaining context. Under such circumstances, applying the classical definition of value is not in any sense problematic.

However, there are many situations where the consideration that is being sought or offered as part of an exchange is either unavailable, or not readily available, from other sources on the open market, such as where one of the parties is seeking or offering a release of a claim or a buy-out by one partner of another partner’s interest in a partnership. In such situations, the classical definition of value continues to guide the actions of many real-world bargainers, but its application becomes more problematic. More specifically, in situations where the value of the consideration cannot be readily determined by reference to comparable transactions (because no other transactions are self-evidently equivalent), the value will, instead, be determined by the value that the parties themselves, acting as a willing buyer and a willing seller, ultimately agree to exchange it for within the context of their transaction. In other words, in such situations, the valuation emerges from the bargaining process itself and is determined *ex-post* by reference to what was ultimately agreed to between the parties to that particular exchange.

It follows that, in such situations, the value that is ascribed to the consideration by one or both of the parties during the course of the bargaining that takes place prior to such an exchange may be substantially influenced by their

perception of the value placed on it by the other side. In many instances, one or both of the parties may not truly know, at least at the outset of the bargaining process, the outcome that they would, themselves, ultimately be willing to accept — it depends upon the outcome that their adversary would ultimately be willing to grant. Since the perceptions of each party as to the value that the other might be willing to place on the consideration will often fundamentally affect the perceiving party's understanding of its actual value, there is a very powerful incentive for each party to convey to the other a distorted impression of their own position, or to refuse to disclose their own position, in an effort to drive the other party's position in a desired direction.¹⁰

This phenomenon creates substantial inefficiencies in the informational exchange and bargaining process that takes place between the parties. In such situations, each party understands that both parties have an incentive to posture. As a result, neither party views the positions on valuation taken by the other side to be genuine, and neither can persuade the other side of the genuineness of their own position. If one party finds herself capable of independently formulating what she considers to be a fair and reasonable outcome from the perspective of both sides and then offers that outcome to her adversary, she can expect that (at least until the eve of trial) her adversary will not accept it as genuine, and will instead simply treat

¹⁰ Within such contexts, litigation itself may be properly understood as simply a manifestation of bargaining, *i.e.*, as an instrument of coercion and as a mechanism that parties use in an effort to drive their adversary's position in a desired direction. It is respectfully submitted that this view of litigation is, in the vast majority of cases, much more accurate than the one implicitly adopted in most academic articles, which tend to portray litigation as a process that parties use to discover and exchange information relating to liability and damages, allowing rational parties to ultimately arrive, on the eve of trial, at similar assessments as to what would constitute a "*fair*" outcome. Although game theoretic articles often suggest that litigation may be dragged out unnecessarily by what are gently referred to as "*agency problems*" (*i.e.*, by lawyers seeking to make money out of protracted conflict), it is clear that lawsuits are commenced, drag on, and do not settle until the eve of trial even in cases where neither lawyer has any prospect of making any profit from the delay, and even when (as is very often the case) all relevant information concerning liability and damages, and the approximate range within which the case ought to settle, is evident from the very outset. It is respectfully submitted that the reason that the vast majority of cases settle, but do not settle until the eve of trial, is not due to the completion of an "*informational exchange*" that produces a common assessment of valuation. It is, rather, due to the fact that, on the eve of trial, each party faces the prospect that, if a valuation is not arrived at through bargaining at that time, it will not be arrived at through bargaining at all, but rather by a process that involves elements of probability but also of chance, akin to a game of dice. This places the parties and their attorneys in a position where (a) the incentives and opportunities for posturing become substantially diminished, and (b) each party and each attorney is obliged to make a realistic assessment of the range of probable outcomes, and of what might constitute a reasonable and achievable settlement, and to offer or, if it is made available, to accept that settlement, in order to fend off potential recriminations, remorse, or legal exposure. The current paper may be fairly interpreted as suggesting that these conditions are not simply the conditions that *prevail* when the vast majority of cases settle — these conditions are, in fact, the effective *cause* of the vast majority of settlements.

it as a starting point from which to try to extract further concessions, causing prejudice to the bargaining interests of the party who initiated the offer.¹¹ These inefficiencies will arise whenever *at least one party's* conception of what might constitute a fair and reasonable outcome is, in effect, dependent upon or inextricably intertwined with his understanding of what his adversary might ultimately be willing to grant. (Such a conception of value is hereinafter referred to as an “*interdependent*” valuation). And these inefficiencies will also arise whenever *at least one party* assumes (as parties involved in conflicts are almost always counseled to assume, and do assume) that the other party's conception of valuation is interdependent.

A sealed-bid arrangement as described in the 1995 article would appear to be useful in situations where (1) neither party's conception of valuation is interdependent, and (2) one or both of the parties is concerned that their adversary's conception of valuation might be interdependent. This is because, under such circumstances, use of the arrangement would (a) allow a party who was concerned that her adversary's conception of valuation was interdependent to put forward a proposal that she considered to be fair and reasonable from the perspective of both sides without fear of causing prejudice to her bargaining interests, and thus (b) allow her to overcome the inefficiencies that would otherwise flow from her mistaken assumption that her adversary's conception of valuation was interdependent, and (c) allow her adversary (who might be operating under a similar mistaken assumption) to do the same, thus facilitating a settlement.¹² But it is respectfully submitted that the assumption made by virtually all real-world litigants — that their adversary's conception of valuation is, at least to some significant degree, interdependent — is, more often than not, entirely correct. In situations where at least one party's conception of valuation is interdependent, symmetrical alternative dispute resolution systems such as the sealed-bid arrangement described in the 1995 article will, as may be seen from the discussion that follows, not provide a solution.

¹¹ For convenience, this paper uses feminine pronouns when referring to a party who has arrived at an independent valuation, and masculine pronouns in all other contexts. As noted *infra* at pp. 15-16, virtually all litigants ultimately find themselves able to arrive at an independent valuation on the eve of trial.

¹² Thus, the arrangement described in the 1995 article could be expected to perform well in situations where both parties had simultaneously arrived at some sort of precipice, such as the eve of trial, where each party understood that their own incentive to posture, and their adversary's incentive to posture, had become diminished. See generally, in this regard, the discussion *infra* at pp. 15-16 and 31).

For example, turning back to the “*split-the difference*” feature described in the 1995 article, we can see that this feature provides something of a “*safety-net*” for a party whose conception of what might constitute an acceptable outcome is interdependent. That feature effectively comes to that party’s rescue in the event that he inadvertently enters a number that is more favorable to the other side than the number entered by the other side. But the rescue is only partial: while the outcome that a party would obtain under those circumstances would be more favorable to him than the one that he had expressed a willingness to accept, the outcome thus achieved will also unquestionably be less favorable to him than some other outcome that the other party was fully willing to grant.¹³ From the perspective of a party whose conception of valuation is interdependent, the “*split-the-difference*” feature may thus be seen as, at best, a neutral feature in that any benefit that he might obtain by reason of his having been tendered a partial safety net will be offset by the fact that an equivalent net must, by definition, have also been extended to the other side.¹⁴

More fundamentally, and by way of further example, we can see that a party whose conception of value was interdependent would have little interest in using, and could rationally refuse to use, a symmetrical “*single-round*” arrangement unless he had somehow first been given credible information about the outcome that his adversary might ultimately be willing to grant. A “*single-round*” arrangement does not itself give him any such information in advance of his offer,

¹³ In the vernacular of real-world bargaining, if the offers “*cross*,” the resulting settlement figure will conclusively establish that “*money was left on the table*,” *i.e.*, that an outcome that was more favorable to a given party was within that party’s grasp but had effectively been lost or “*walked away from*” by that party or his attorney. Since obtaining an outcome that is the most favorable outcome that one’s adversary might be willing to grant is, at least during the early phases of litigation, seen by most parties (and by many attorneys) as the ultimate function and duty of the attorney, an arrangement that holds out the prospect of conclusively confirming that the attorney failed to achieve that outcome is inherently problematic. The fact that a client would, under such circumstances, obtain an outcome somewhat more favorable than the one that his attorney had recommended does not in any sense serve to solve the problem. We are touching here not only on practical and game theoretic issues, but on issues relating to claims for legal malpractice.

¹⁴ It will be appreciated that this is a direct consequence of the fact that the “*split-the-difference*” feature is, by definition, symmetrical: both parties are granted an equivalent, partial “*safety net*,” and each knows that the other has one. As will become evident from the discussion of buy-sell arrangements set forth *infra* at Section II of this paper, it would in many circumstances be more effective to allow one party to credibly demonstrate that she had elected to operate without the benefit of any “*net*” at all. *See also*, in this regard, Schelling, Thomas C., The Strategy of Conflict (Cambridge, Mass.: Harvard Press) (1960), at pp. 34-35. “([W]hen the opponent has resolved to make a moderate concession one may help him by proving that he can make a moderate concession.... One must seek, in other words... to deny oneself too great a reward from the opponent’s concession, otherwise the concession will not be made.”)

and, if he makes an overly self-serving offer, with the result that no settlement is achieved, the information that he then receives (*i.e.*, that his adversary, to the extent that she made any offer at all, proposed an outcome that did not match or cross with his own), is no longer of any use to him in the context of that arrangement — even if he were to assume (a) that his adversary had made a proposal and (b) that his adversary’s conception of valuation was *not* interdependent, the information that he obtains is of no further use to him, because no further offers are permitted.

Similarly, such a party would have little interest in using, and could rationally refuse to use, a symmetrical “*multiple-round*” arrangement. Such an arrangement would allow a party who made a proposal that failed to yield an agreement to take whatever inferences might be drawn from that failure into account when he makes his next proposal. However, as is acknowledged within the 1995 article, those inferences have no credibility under a symmetrical “*multiple-round*” arrangement because each side has an incentive to posture — under such an arrangement, a party’s final proposal is the only one that can, if it fails, allow that party to potentially draw meaningful inferences concerning his adversary’s position.

Of course, in the real world of bargaining, more than 90% of all parties ultimately come to a point where they are able to free themselves from an interdependent conception of valuation — they reconcile themselves to the prospect that they (or their attorneys) might be leaving “*money on the table*,” and bargain without any “*safety-net*” at all. This is evident from the fact that more than 90% of all civil litigation in the United States is ultimately resolved through a bargained solution prior to trial, under circumstances where neither party has any “*safety net*” or any way of knowing whether the outcome that was embodied in the settlement truly reflected the most favorable outcome that his adversary was willing to grant. But these same statistics also indicate that the vast majority of such cases (*i.e.*, eighty percent or more) are not resolved until the parties are within thirty days of trial.¹⁵ It seems clear that, like mediation, sealed-bid arrangements such as the one described in the 1995 article might produce a substantial amount of settlements if they were used on the eve of trial (when the parties would at last arrive at the “*final round*” of offers under the proposal set forth in the 1995

¹⁵ See generally, for citations to statistics showing that more than 90% of cases settle, but that 80% do not settle until the parties are within thirty days of trial, Spier, K.E., The Dynamics of Pretrial Negotiation, *Review of Economic Studies*, 59, 93-108 (1992); Williams, G.R., Legal Negotiations and Settlement (St. Paul MN: West Publishing)(1983).

article). But this would not serve to establish that the arrangement had any real utility, because, as is shown by the above-cited statistics, virtually all cases will settle at that point anyway, with or without the use of an arrangement such as the one described in the article.

Having noted the interplay between the problems identified in the 1995 article and certain symmetrical aspects of the arrangement described therein, we might fairly wish to move on to a consideration of whether a system that was at least in some respects asymmetrical might serve to solve some of those problems.¹⁶ But before doing so we must first address what might be fairly raised as a fundamental objection, arising out of the deeply ingrained notion that a system *must* be symmetrical (like the legal system itself, and like all “*alternative dispute resolution*” systems developed over the centuries) in order to be perceived as fair by both parties, and thus *must* be symmetrical in order to be of any practical use in the real world of non-cooperative bargaining. We must first consider whether an asymmetrical system can ever be fair and, as a result, useful. As is discussed in the section that follows, there is no question that it can, because such an asymmetrical arrangement is already widely in use within a somewhat different non-cooperative bargaining context: disputes between joint-owners of property over who should get the property, and under what terms, when the joint-ownership comes to an end.

¹⁶ For example, as we have seen, the “*signaling*” problem arises out of the fact that neither party can use the system without the other’s consent. While a court’s imposition of such a system on both parties would solve this problem, the other problems flowing from the system’s symmetry would remain — for example, the “*single vs. multiple round*” problem arises out of the fact that, if each side has a “*single round*” we have “*learning process*” problems, while if each has “*multiple rounds*” we have “*credibility*” problems. While it would be possible to explore the origins and implications of these problems on a much deeper level (*see*, for such an exploration, Innocenti, A., Linking Strategic Interaction and Bargaining Theory. The Harsanyi-Schelling Debate on the Axiom of Symmetry, Working Paper, Economics, University of Siena (2005)), for our purposes it would appear more worthwhile to simply see whether those problems might be solved by an asymmetrical arrangement, allowing a party arriving at an independent valuation to make progress prior to the eve of trial.

II. Analysis of Asymmetrical Buy-Sell Arrangements

IN THIS SECTION OF THE PAPER we consider an asymmetrical system that is already being widely and successfully used in the real world: “*buy-sell*” arrangements within the context of dissolutions of joint ownership relationships.¹⁷ We first consider the circumstances under which such arrangements are used and the extent to which those circumstances are analogous to those faced by parties who are involved in litigation. We then note their asymmetrical features, fairness and utility, consider some game theoretic and practical aspects, and identify the underlying principles that give rise to their utility.

II.1 Overview of Buy-Sell Arrangements, and Analogies to Litigation

Where joint owners of property (such as real estate, a partnership, or a closely held corporation) are engaged in a dispute, or where their relationship has in some other respect become dysfunctional, it will often be in the best interests of both parties to sell the property to a third-party, with the former owners then going their separate ways after splitting the proceeds in accordance with their percentage ownership interests in the underlying property. (In cases where either party has a claim against the other with respect to the extent of those interests or the circumstances which led to the sale, some portion of the proceeds of the sale may be held by a neutral party pending a resolution of those claims, as is done in court-ordered dissolution proceedings, so that the jointly-owned property will not be held hostage to the outcome of the dispute). However, in many instances a sale to a third party is not a viable option, either because there is no valid, external market for the property (as would be the case whenever each of the common owners values the property much more highly than would a third-party)

¹⁷ Buy-sell arrangements are occasionally referred to in economic literature as “*cake-cutting*” mechanisms or, more ominously, as “*shotgun*” arrangements, or “*Texas Shootouts*.” Game theoretic analysis of such buy-sell arrangements may be found within articles such as Brooks, R., and Spier, K.E., Trigger Happy or Gun Shy? Dissolving Common-Value Partnerships with Texas Shootouts, Kellogg School of Management Mimeo (2004); Kittsteiner, T. & De Frutos, M.A., Efficient Partnership Dissolution Under Buy-Sell Clauses, *Econometric Society* 2004 Latin American Meetings, 314 *Econometric Society* (2004); Cramton, P., Gibbons, R. and Klemperer, P., Dissolving a Partnership Efficiently, *Econometrica*, Vol. 55, pp. 613-632 (1987).

or because there is some contractual relationship between the parties that effectively defines a buy-out of one by the other as the only permissible option.¹⁸

A party who finds himself in such a situation is in a position that is, in several respects, directly analogous to the position that he would be in if he were involved in litigation. For example, where a relationship between joint owners deteriorates, the jointly owned property may deteriorate as well, and revenues or other value that might have been derived from the property will be increasingly reduced over time, to the detriment of all concerned. This corresponds to the position that parties find themselves in within litigation: each party will incur increasing levels of hardship and expense as the conflict drags on (a feature that was incorporated into the experimental model described in the Babcock/Landao study by having the parties arrive at precipices where each faced the prospect of further expense).

Such a party is also in a position that is analogous to litigation by virtue of the lack of an external market for the respective interests of the parties. In litigation, a claimant is precluded from selling his interest in the litigation to a third party under the legal doctrine of champerty (which reflects a societal interest in discouraging the pursuit of litigation), and, although a defendant will in many situations have secured insurance *ex ante*, neither the defendant nor the defendant's insurer can "*buy*" a meaningful release of the underlying claim from anyone other than the claimant himself. A party who is involved in litigation and who wishes to extricate himself from it rather than carry it all the way through the process of a trial and subsequent appeal (because of the expenses, risks and inefficiencies associated with that process) is in a position where he is effectively compelled to deal or bargain with his adversary — a position that is to that extent directly analogous to that considered by Brooks and Spier in their game theoretic analysis of buy-sell arrangements in joint ownership situations involving a "*thin*" or non-existent external market.¹⁹

A party involved in a dysfunctional joint-ownership relationship is also in a position that is analogous to the position that he would find himself in within the context of litigation in the sense that, as noted *supra* at pp. 11-13, the underlying

¹⁸ For purposes of this discussion, we assume that, as is often the case in the real world, the parties have no real option other than a buy-out by one party of the other party's interest. We also assume that, as is also typically the case in the real world, the property is capable of generating ongoing revenues or has other significant value, sufficient to allow a party who purchases the other party's interest to pay for that purchase out of revenues that could then be derived from the property (with that purchase price being either paid over time through an agreement between the parties, or paid up-front by the purchaser through a loan secured through a pledge of the revenues to a bank). This latter assumption, which reflects most real-world situations of this type, allows us to dispose of variables that might otherwise arise out of the respective wealth of the parties.

circumstances are such that each party's conception of what might constitute a fair and reasonable outcome may be, at least at during the preliminary phases, interdependent (*i.e.*, inextricably intertwined with his understanding of what his adversary might ultimately be willing to grant). More specifically, each party would want to sell his interest to his adversary if his adversary valued the property more highly than he did, and each party would, conversely, want to buy out his adversary's interest if his adversary's valuation of the property was lower than his own. But neither will have any knowledge of his adversary's valuation unless and until his adversary proposes a sale of the adversary's interest for a given price, or a purchase of the other's interest for a given price.²⁰

Such a party is, moreover, also in a position that is analogous to litigation in the sense that, if each party's conception of what would constitute a fair and reasonable outcome is interdependent, then the parties will be at an effective deadlock. As with litigation, the status quo will drag on, to the detriment of each side.²¹

¹⁹ See, *e.g.*, Brooks and Spier, at page 2 (“*This paper is concerned with the dissolution of common ownership agreements — such as closely held corporations, partnerships, and limited-liability companies, - where the external market for ownership interests is thin. The absence of efficient ownership markets implies that dissolution effectively leads to a private auction among the members of the venture. There are numerous ways of conducting this auction, as well as meaningful alternatives to an auction (e.g., negotiation, mediation, or liquidation), but we focus on a particular auctioning device known as a Texas Shootout. A Texas Shootout — so labeled because once initiated (or triggered) only one party will be ‘left standing’ — is a buy-sell provision where a party names a price for her share of the venture and another party decides whether to pay that price (i.e., buy out the first party) or to be paid that price (i.e., sell out to the first party).*” (Footnotes omitted.)

²⁰ One highly interesting aspect of the dynamic that takes place between parties who are attempting to extricate themselves from a joint ownership relationship through a purchase or sale of one of the parties' interests in the underlying property is that, in contrast to litigation, there is a very powerful incentive not to posture, and to instead retreat into intransigent silence. This arises out of the fact that if, for example, a party makes an offer to sell his interest for an inflated price, his adversary will typically respond by simply “*turning the table*” on him, and offering to allow his interest to be bought out for the exact same price. Alternatively, if a party makes an offer to buy his adversary's interest for a deflated price, his adversary will again respond by “*turning the table*” and offering to buy the offering party's interest for that exact same price. In cases where the two parties stand in a fiduciary relationship to one another (as is typically the case between joint owners of property, whether it be a partnership, a closely held corporation, or a marital relationship), a party who refuses to allow the table to be turned may be fairly interpreted as having attempted to profit at the other party's expense, which in turn would clearly constitute a breach of that fiduciary duty. This is the dynamic in which “*buy-sell*” mechanisms have their origin.

²¹ In recognition of this fact, game theoretic analyses of buy-sell mechanisms emphasize the efficiency of contractual arrangements dictating their initiation by one of the parties under specified conditions. See, *e.g.*, the articles cited *supra* at note 17, p.17. (They also tend to emphasize that the party with the most “*information*” about value should be the one who must initiate. This latter emphasis would appear to be less important in situations where, as is typically the case, the joint-owners are in a fiduciary relationship: in such contexts, a joint-owner is normally compelled by self-interest to fully disclose any information that he might have on valuation issues to the other owner, as a failure to do so may provide grounds for a rescission of the sale and/or an award of damages).

However, such a party is in a position that is very different from the position that she would find herself in within the context of litigation in one very simple and important respect. As was noted *supra* at page 13, where two parties are involved in litigation, they will find themselves in an effective deadlock whenever *at least one party's* conception of what might constitute a fair and reasonable outcome is interdependent. However, in dissolution of joint-ownership of property contexts, we can see that, if *one* party reaches a point where she finds herself able to arrive at an independent valuation (*i.e.*, a valuation that was not interdependent), then she will, unlike in litigation, be able to use that valuation in a manner that is credible, effective, and non-prejudicial. She can do this by disclosing that valuation to her adversary and by binding herself to either sell her interest at the stated price, or buy her adversary's interest at the stated price, at the election of her adversary. This, in turn, allows her to either break the deadlock or establish that the continuing damage flowing from the deadlock was solely the responsibility of the other side. (Buy-sell proposals are virtually always accompanied by a deadline, since it is understood that a failure by the party who is on the receiving end of the proposal to elect to buy or sell within a given time will further devalue the property, nullifying the valuation reflected in the proposal.)

II.2 Documentation Issues Relating to Buy/Sell Arrangements

It will be observed that a party who has arrived at an independent valuation and wishes to initiate the use of a buy-sell arrangement faces an issue with respect to documentation that is similar to the issue identified in the 1995 article: what are the collateral terms that the parties would be required to abide by if an election to buy or sell at a proffered number was made? In many cases this does not become an issue, because in many cases the parties involved in the buy-sell transaction will have included a so-called "*buy-sell clause*" in the underlying joint ownership agreement, setting forth the terms that would apply in the event that a buy-sell proposal was initiated by one of the parties. But buy-sell proposals are also routinely used in real-world situations even where there is no underlying joint ownership agreement between the parties providing for their use (and are, in fact,

²² For example, where the controlling shareholders of a closely held corporation wish to bring in new investors, and a decision is made to grant stock to new investors at a price that a minority shareholder might challenge as unreasonably low, the controlling shareholders will typically offer all shareholders the right to buy additional stock under identical terms prior to granting those terms to new investors, thus putting the minority shareholders in a position where they must effectively elect to either buy the stock or forego a later claim that the price in question was unreasonably low. This is routinely done, and done with great effect, even where there are no contractual arrangements between the shareholders providing for the making of such an offer. The offer is simply made.

often used in situations that do not involve a division of jointly owned property).²² In such situations, the party who proffers the valuation simply presents, at the time that she makes that proffer, a proposed purchase and sale agreement setting forth all of the collateral terms (such as the date of closing, manner of payment, etc.). Obviously, if the proposed terms are such that the party who is on the receiving end of the proposal could justifiably reject them, then the party who proposed those terms will have effectively given the other party a rational basis to not go forward, relieving the other party of the pressure to either buy or sell at the stated price. But the ability of a party to unilaterally proffer collateral terms that the other side would not be in a position to justifiably reject cannot be seriously doubted.²³ Thus, the documentation issue does not present an inherent obstacle to the use of buy-sell arrangements, even where the underlying ownership agreement does not provide for the use of such an arrangement.²⁴

II.3 Effectiveness of Buy-Sell Arrangements

The power of a buy-sell proposal is intuitively understood. The party who makes the proposal must go through the often difficult process of arriving at an independent valuation, and she must, in order to protect her own interests, be satisfied that the valuation is fair, since she may be forced to stand on either side of the transaction. But by going through that process she arrives at a position of significant power, because she is now able to effectively compel her adversary, in order to protect his own interests, to go through a similar process: determining whether to buy or sell at the stated amount.²⁵ The party who proposes the buy/sell price is engaging in conduct that is self-evidently fair, but that is at the same time profoundly coercive. If her adversary refuses to either buy or sell at the stated

²³ If, as shown in the Babcock/Landau study, parties involved in a non-cooperative bargaining relationship are able to independently formulate a dollar amount that is fully acceptable to both sides 69% of the time, there is no reason to suppose that such a party would be unable to identify mutually acceptable collateral terms, which are by definition much less controversial, with at least a similar rate of success. Here, again, we are touching upon Schelling's "focal point" phenomenon.

²⁴ See also, for a discussion of issues relating to the use of buy-sell arrangements where such use is not provided for in a pre-existing agreement, Section 3 of Brooks and Spier, at page 8 ("*In this section, we assume that there are no contractual agreements regulating the use of buy-sell offers....*")

²⁵ The process that the adversary goes through will vary depending upon whether the adversary's conception of valuation is interdependent. An adversary who had arrived at an independent valuation would simply compare his number with the proffered number — any differential between the two numbers would be sufficient *in itself* to compel him to buy or sell. (Under such circumstances the party who initiated the proposal may wind up selling her interest for a price that is lower than her

[footnote cont. on next page]

price, evidence of this refusal can then be used against her adversary in a multitude of different ways. It will, for example, allow her to justify devoting her resources to pursuing litigation against her adversary, to form alliances with third-parties who might have otherwise been reluctant to take sides, to sow dissension or equivocation among her adversary's allies, and to establish at the end of the affair that all diminution in value that took place after the tendering of the buy-sell offer was directly attributable to self-destructive and irrational conduct on the part of her adversary. In this regard the initiation of a buy-sell proposal involves a form of adversarial engagement similar to one that Schelling considered within his analysis of the Cold War:

“Cold war politics have been likened, by Bertrand Russell and others, to the game of ‘chicken.’ This is described as a game in which two teen-age motorists head for each other on a highway — usually late at night, with their gangs and girlfriends looking on — to see which of the two will first swerve aside. The one who does is then called ‘chicken.’

“The better analogy is with the less frivolous contest of chicken that is played out regularly on streets and highways by people who want their share of the road, or more than their share, or who want to be first through an intersection or at least not kept waiting indefinitely.

“‘Chicken’ is not just a game played by delinquent teen-agers with their hot-rods in southern California; it is a universal form of adversary engagement....

“These various games of chicken — the genuine ones that involve some real unpredictability — have some characteristics that are worth noting. One is that, unlike those sociable games it takes two to play, with chicken it takes two not to play. If you are publicly invited to play chicken and say you would rather not, you have just played. [emphasis added].”

Schelling, Thomas C., Arms and Influence (New Haven, CT.: Yale University Press) (1966), pp. 116-118.

[Footnote 25 cont. from last page]

adversary would, at least in theory, have been willing to grant, etc. But the possibility that she may be leaving some “money on the table” is a matter of indifference to her - what she seeks is to bring the matter to an end by obtaining an outcome that she has defined as acceptable.) If the adversary's conception of value is interdependent, then the proffered number will exert a gravitational pull upon the adversary, because the structure of the system is such that there is no rational basis for supposing that the number is “postured.” The proffered number effectively satisfies the classical definition of value — he can rationally elect to either buy or sell at that number, but he cannot rationally elect to ignore it. He is compelled by self-interest to either buy or sell at that number prior to the deadline.

It should be noted that, while the initiation of a buy-sell proposal has very powerful coercive aspects, it is not in any sense unlawful, because it is not in any sense unfair. The coercive effect arises solely out of the fact that, having been placed on the receiving end of a proposal that is transparently fair, the receiving party is effectively compelled, in order to protect his own interests, to elect to buy or sell without delay. The efficacy of buy-sell arrangements is evident from the fact that they have been praised by real-world practitioners as “*the ultimate mechanism for resolving disputes,*”²⁶ and by the fact that, according to some commentators, an attorney’s failure to put his client in a position to utilize such an arrangement “*is considered ‘malpractice’ among legal scholars and practitioners.*”²⁷ Buy-sell arrangements thus serve as an example of an arrangement whereby one party can engage in effective, unilateral, coercive action, without running afoul of the rules imposed by a sovereign power, and without having to seek or secure the consent of the other side or the assistance of a court. As is discussed below, they also serve to provide guidance in the search for methods whereby justice may be rationally supplied by self-interested parties in the real world.

²⁶ See, in this regard, Kittsteiner and De Frutos at note 2, p.1, quoting from the Guide to US Real Estate Investing, issued by the Association of Foreign Investors in Real Estate. It should be noted, however, that buy-sell mechanisms could be fairly viewed, first and foremost, as not being dispute resolution mechanisms at all — they may be fairly viewed as *measuring instruments* that allow the initiating party to *measure* the capacity of her adversary to be reasonable by putting him in a position where he has no rational incentive not to be reasonable. Dispute resolution is produced as a by-product.

²⁷ Quoting from Brooks and Spier at note 6, p.3. An attorney’s failure to include a buy-sell clause in a joint ownership agreement would be unlikely to give rise to such a claim where the client wanted to initiate a buy-sell proposal (as opposed to forcing his adversary to do so) because, as noted herein, a party can always put forth a buy-sell proposal, with or without such a clause. However, it seems clear that, whenever one party puts forth a buy-sell proposal (or initiates the use of an asymmetrical escrow arrangement, as described in Section III of this paper), the other party’s attorney will find himself in a position where he will, depending upon how he advises his client to respond, have considerable exposure for a claim of legal malpractice. This is another feature that serves to distinguish the asymmetrical systems described herein from sealed-bid arrangements: under the latter, a party may rationally refuse to use the system, or simply treat it as a device for conveying postured proposals, and thus a lawyer can safely ignore it or simply tell his client not to use it, or to posture.

III. An Asymmetrical Approach to Bargaining over a Monetary Term

HAVING FREED OURSELVES from the notion that an arrangement must be symmetrical in order to be fair and useful within the context of non-cooperative bargaining, we now consider the extent to which an arrangement involving certain asymmetrical features, similar to those appearing in buy-sell arrangements, might prove to be effective within the context of bargaining over a monetary term. Towards that end the balance of this paper introduces and considers the structure of an asymmetrical escrow arrangement that may, for purposes of this paper, be briefly summarized as follows:

One party deposits something of value (such as a promissory note, a release, or a settlement agreement that she has signed) with an escrow agent. She authorizes the agent to give it to her adversary if her adversary accepts certain terms by a deadline. She designates at least one term (such as a monetary amount) as a confidential term. She authorizes the escrow agent (or some other neutral agent) to confidentially interact with her adversary. Her adversary is then given (a) notice of these facts, (b) a description of the general nature of any undisclosed term (such as that it consists of a monetary amount), and (c) an opportunity to confidentially submit proposals to the agent, proposing to accept all of the terms if the undisclosed term falls within certain parameters specified in the adversary's proposal (e.g. if the undisclosed term is a monetary amount, the adversary can bind himself to accept it if it is, for example, "equal to or greater than" a number that he specifies in his proposal). If the adversary submits a proposal that satisfies the conditions for a release of the escrow, the matter is resolved. If the adversary submits a proposal that does not satisfy those conditions, the agent informs him of that fact and invites him to confidentially submit an alternative proposal, an invitation that is repeated on each such occasion until the deadline has been reached. If the matter is not resolved by the deadline, neither party will know the outcome tendered by their opponent, but each will be able to prove, via an affidavit from the agent, the outcome that he or she had fully tendered to the other side prior to the deadline.

For purposes of analyzing the relevant features of the above-described arrangement and the manner in which they interact with one another, we shall

first compare and contrast a few of those features with features found in buy-sell arrangements and sealed-bid arrangements, with explicit reference to game theoretic concepts such as commitment, signaling, sequence, and credibility. We shall then summarize the system from the perspective of a party who initiates the use of the system, and from the perspective of a party who is on the receiving end of that use, making implicit reference to other game theoretic concepts such as focal points, audience issues, brinkmanship, asymmetric information, incomplete information, limited communications, limited horizons, and learning processes.

III.1 Commitment Issues

In buy-sell arrangements, the party who makes the buy-sell proposal engages in a process of unilateral commitment. The commitment is self-effectuating: the initiating party binds herself to buy or to sell at the proffered number, at the election of the other party. In contrast, in sealed-bid arrangements, the issue of commitment is addressed either through a prior agreement entered into between the parties, or through the imposition of the arrangement upon both parties by a sovereign power acting through its court system.

Is there a method by which a party bargaining over a monetary term can, as in buy-sell arrangements, credibly commit to a given outcome through unilateral action, without having to secure the consent or cooperation of the other side, and without having to secure the intervention of a sovereign power? The answer is yes. A party bargaining over a monetary term can do so by binding herself to accept that outcome and depositing that commitment as escrow. For example, a party who is a potential buyer (such as a defendant in a lawsuit) can credibly commit herself to pay a specified amount of money for the desired object by depositing, as escrow, either a sum of money or a promissory note for the specified amount and authorizing the escrow agent to release it to her adversary if, and only if, he binds himself to deliver the desired object in exchange for the specified amount. We can see that such an escrow feature has been incorporated into the asymmetrical system described above.

III.2 Signaling Issues Relating to a Party's Position

It will be appreciated that, both within the context of a buy-sell arrangement and a sealed-bid arrangement, neither party wishes to propose an outcome that his adversary can then use as a starting point from which to try to extract further concessions. In the buy-sell context, the party who initiates the use of the system accomplishes this by conferring upon her adversary the right to elect to

buy or sell at the stated amount: there is no basis for him to suppose that the number is a starting point from which he might seek to extract a more favorable number. If he believes that the initiating party's number overstates the value of the underlying property, then he must rationally elect to sell, rather than seek to negotiate a lower amount. If he considers the number too low, he must rationally elect to buy. In a sealed-bid arrangement, the signaling problem is addressed through confidentiality, *i.e.*, through the "sealing" of the "bids": neither party will know what the other party's proposed number is unless the neutral party makes a determination that the numbers match or cross, in which event the matter will be resolved. Thus, neither party will be in a position to use the other party's proposed number as a starting point from which to try to extract further concessions.

Within the context of an escrow system of the kind that is currently under consideration, it is apparent that, if the monetary term that the initiating party has bound herself to through the deposit of the escrow is disclosed to the other party, then the other party may use it as a starting point from which to try to extract further concessions. Thus, the above-described asymmetrical escrow system allows the monetary term to be kept confidential from the initiating party's adversary unless and until the adversary satisfies the conditions for the escrow's release, agreeing to accept and bind himself to all of the proposed terms if the monetary amount falls within a range that he specifies, at which point there would be no further opportunity for negotiations or attempts to extract concessions. Similarly, in order to deprive her adversary of a rational basis not to use the system out of a professed concern that the outcome that he proffers will become a starting point for demands for further concessions, the party who initiates the use of the arrangement forswears any right to be informed about any use (or non-use) of the system by her adversary unless that use results in a resolution of the dispute that is fully acceptable to both sides.

III.3 Sequence Issues

Another difference between buy-sell arrangements and sealed-bid arrangements is that, in sealed-bid arrangements, the parties act simultaneously (*i.e.*, the parties each submit a confidential number and the numbers are then compared by a neutral party, either in a "single-round" or in "multiple-rounds"), whereas in buy-sell arrangements the parties act in sequence (*i.e.*, one party commits herself to either buy or sell at a specific number, and the other party then elects to either buy at that number, to sell at that number, or to do nothing).

It will be appreciated that the asymmetrical escrow arrangement described above involves sequential action, rather than simultaneous action, by the involved

parties. One party acts first by depositing the escrow. Her adversary is then in a position similar to a party who is on the receiving end of a buy/sell proposal: he can either seek to secure the escrow's release, or do nothing. Although (unlike in a buy-sell arrangement) the monetary amount that she proposed is not disclosed to him, he is permitted to engage, with complete confidentiality, in a learning process with respect to that number. He can, for example, propose to accept and be bound by his opponent's proposed terms if the undisclosed number is equal to or greater than (or, alternatively, less than) some number that he proposes. If the undisclosed number is lower than the number that he proposes, he is informed of that fact and invited to submit another proposal, an invitation that is repeated on each such occasion until the deadline arrives. He cannot rule out the possibility that his opponent has placed a number that is acceptable to him within his grasp unless he utilizes the system and engages in this learning process. The structure and nature of the arrangement is such that he has no rational basis not to do so.

III.4 Credibility Issues

One of the most significant distinctions between sealed-bid arrangements and buy-sell arrangements is that, in the latter, the valuation proposed by the party who initiates the use of the arrangement has inherent credibility, and cannot be rationally interpreted as a "*postured*" number, because the arrangement is such that she may be forced to stand on either side of that valuation, either as a buyer or a seller.²⁸ She has engaged in a self-sacrificial act that carries within it the proof of its own credibility. We return here, again, to the work of Thomas C. Schelling:

"The purpose of this chapter is to call attention to an important class of tactics, of a kind that is peculiarly appropriate to the logic of indeterminate situations. The essence of these tactics is some voluntary, but irreversible sacrifice of freedom of choice. They rest on the paradox that the power to constrain an adversary may depend on the power to bind oneself... and to burn bridges behind one may suffice to undo an opponent...."

"If the essence of a game of strategy is the dependence of each person's proper choice of action on what he expects the other to do, it may be useful to define a 'strategic move' as follows: A strategic

²⁸ We can see that, in stark contrast, an offer made under a sealed-bid arrangement has no inherent credibility whatsoever. While an offer put forth in a single-round version, or in the final round of a multiple-round version, is more credible than the initial offers put forth in a multiple-round version, it is clear that these assessments are purely relative — no such offer has any credibility absent some factor entirely external to the arrangement, such as arriving at a precipice like the eve of trial.

move is one that influences the other person's choice, in a manner favorable to one's self, by affecting the other person's expectations on how one's self will behave. One constrains the partner's choice by constraining one's own behavior."

Schelling, Thomas C., The Strategy of Conflict (Cambridge, Mass.: Harvard Press) (1960), pp. 21, 160.

We can see that, in an asymmetrical escrow system, the party who initiates its use is engaging in a similar, inherently credible, self-sacrificial act — as in a buy-sell proposal, she effectively tenders a “*safety-net*” to her adversary while dispensing with one for herself, and announces her willingness to “*stand on either side*” of her proposed number in the sense that, if the final proposal submitted by her adversary is less favorable to her by a single dollar, she is content to rest with an affidavit showing that her adversary effectively rejected her proposal, and to cede an affidavit to her adversary showing that she effectively rejected the outcome that he ultimately proposed at that point in time (an affidavit that would be worse than useless to him if he failed to propose a reasonable outcome). She has, as in a buy-sell arrangement, effectively placed herself, her adversary, and her adversary’s attorney at a precipice, similar to the eve of trial, where it is adverse to one’s own interests to posture, and where self-interest requires one to make a realistic assessment of what might constitute a reasonable and achievable outcome, and to propose it or, if offered, accept it in order to fend off potential recriminations, remorse, or legal exposure, including exposure for legal malpractice.

We now turn to a summary of the system from the perspective of each side.

III.5 Summary of the System from the Perspective of a Party who Initiates its Use

- (a) As is the case with buy-sell arrangements, a party can initiate and use an asymmetrical escrow system (the “*system*”) at any time, without having to first enter into an interim agreement with her adversary, and without having to seek or secure the consent or cooperation of her adversary or the assistance of a court or other sovereign power.
- (b) As is the case with buy-sell arrangements, a party who initiates the use of the system is not signaling weakness — she has, in effect, simply tendered a “*take-it-or-leave-it*” or “*drop-dead*” offer to her adversary. She will, in effect, be expressing complete indifference to any alternative outcomes that her adversary might wish to have her consider, as the system will not disclose any such alternative proposals to her.

- (c) As is the case with buy-sell arrangements, a party's initiation of the system places her adversary in a position where he is effectively compelled by self-interest to respond. He has no rational basis for failing to use it to determine whether his opponent's proposed outcome surpasses, or at least meets, an outcome that would be reasonable from his perspective. This is because her proposed outcome has been deposited as escrow and thus placed within his grasp, and the fact and contents of any data that he submits into the system, such as data defining outcomes that would be acceptable to him, will not be disclosed to her or to anyone else unless it produces an outcome that both parties have defined as fully acceptable, which would fully resolve the underlying dispute.
- (d) If the party who initiates the use of the system proposes an outcome that is reasonable and a settlement is not achieved, then she will have obtained something of significant strategic value: the system will provide her with an affidavit describing the system and the manner in which she used it, and attesting to the fact that her proposed outcome was not accepted, supporting a finding that her adversary had effectively rejected a reasonable outcome. As is the case with a buy-sell proposal that does not produce a sale, this will:
- 1) allow her to justify, from that point forward, devoting her resources to pursuing something other than a voluntary agreement with her adversary (*i.e.*, it would allow her to justify a devotion of resources to litigation.)
 - 2) allow her to form alliances with third-parties who might have otherwise been reluctant to take sides; to sow dissension or equivocation between or among her adversary's allies and/or between her adversary and his bargaining agents, and to gain support from and quell dissent among her own allies or constituents. (We are referring here to "*audience*" issues, and referring again to Schelling's "*gangs and girlfriends*," as referenced *supra* at p. 22.)
 - 3) allow her to establish at the end of the affair that all expenses that were incurred by her and her adversary following the use of the system were directly attributable to her adversary's failure to accept a reasonable outcome that she had fully placed within her adversary's grasp through her use of the system.

III.6 Summary of the System from the Perspective of a Party whose Opponent Initiates its Use

- (a) From the perspective of a party on the receiving end of a use of the system, it will be apparent to him that his opponent had no rational incentive to propose

an unreasonable outcome, as this would deprive her of the ability to obtain the strategic benefits described above in paragraph (d)(1)-(3) of the preceding section and would, if he used the system and proposed a reasonable outcome, allow him to secure those strategic benefits for himself via an affidavit concerning his use of the system. This would be directly contrary to his opponent's self-interests.

- (b) If he assumes that his opponent has, consistent with her own self-interests, proposed a reasonable outcome, it is in his best interests to respond by using the system to propose a reasonable outcome, as this will prevent his opponent from obtaining a strategic gift. It would be irrational him to fail to do this.²⁹
- (c) Even if he assumes that his opponent is irrational and has, contrary to her own interests, proposed an unreasonable outcome, it would still be irrational for him to fail to use the system, because under those circumstances he could, by proposing a reasonable outcome, obtain those strategic benefits himself.
- (d) He has no basis for believing that his use of the system might make him look weak, because his opponent will not know whether he used the system at all unless his use of the system produces an outcome that he has defined as fully acceptable, which would fully resolve the underlying dispute.
- (e) He has no reasonable basis to be concerned that, if he used the system and proposed a given outcome, he might then find himself in a position where he would regret his proposal and want to propose a different outcome but be unable to do so. If he proposes an outcome that is *less* favorable to him than the one proposed by his opponent, he will obtain the more favorable outcome proposed by his opponent, and thus will have no basis for regret. If he proposes an outcome that is *more* favorable to him than the one proposed by his opponent, the system will, on each such occasion up to the deadline, automatically notify him of that fact and allow him to submit another proposal. If his use of the system does not produce a resolution of the underlying dispute, his final proposal would, if it was later shown to be less reasonable than his opponent's, be the only one that he might later come to regret.

²⁹ For example, if the party on the receiving end of a use of the system is an attorney, he will not be able to rule out the possibility that an outcome that would be reasonable from his client's perspective has been placed within his grasp unless he uses the system. If his client's opponent has proposed such an outcome and he fails to use the system, or fails to use it in a reasonable manner, then (a) he will have caused evidence that could form the basis for a claim or finding of malpractice to fall into the hands of his adversary, and (b) he will not know whether he has caused such evidence to be delivered into the hands of his adversary unless and until she elects to reveal that evidence.

IV. Conclusion

WITHIN THE FIELD OF LEGAL CONFLICT, statistics show that more than 90% of all cases settle, but that 80% do not settle until the parties are within thirty days of trial (*i.e.*, for a period of years). These statistics serve to demonstrate that the vast majority of cases will settle when, but only when, the parties and their attorneys find themselves in a position where (a) the incentives and opportunities for posturing are substantially diminished, and (b) each of the parties, and each of their attorneys, is obliged to make a realistic, independent assessment of what might constitute a reasonable and achievable settlement, and to accept that outcome if it is made available, in order to pursue and protect their own interests and fend off potential recriminations, remorse, or legal exposure.³⁰

This paper has shown that asymmetrical buy-sell and escrow arrangements allow a party to place herself and her adversary in a position where the above-referenced conditions are replicated, and to do so well in advance of a trial, and even before the filing of a lawsuit. The use of such a system may be initiated whenever one party arrives at point where she is able to dispense with an interdependent conception of valuation and accept the prospect that she may to some extent be leaving “*money on the table*.” If it is objected that she cannot rationally be expected to arrive at such a point, the answer may be found in those same statistics: she will ultimately find herself able to do so more than ninety percent of the time. There is no logical impediment to her arriving at that point sooner rather than later — the impediment has always been a purely practical one: prior to the introduction of the asymmetrical escrow system described herein, there was no incentive for her to do so, or to do so with any degree of realism or precision,

³⁰ In those rare instances where a trial actually takes place, there is nothing more consoling to a litigant and her attorney than the knowledge that the litigant’s adversary had, by effectively rejecting a fair and reasonable outcome, left them with no choice other than to go forward with the trial: “*For it holds good of inward as of outward circumstances that there is for us no consolation so effective as the complete certainty of unalterable necessity. No evil that befalls us pains us so much as [does] the thought [that there were] circumstances by which that evil might have been warded off.*” (Schopenhauer, Arthur, The World as Will and Idea, 1818 (New York: Charles Scribner’s Sons) (1956), pp. 225-228.) It is contrary to one’s self interests to afford an opponent such refuge, and this is another reason why such refuge will rarely be granted.

because arriving at that point sooner, rather than later, would not do her any practical good unless, as we have seen, her adversary (a) had for some reason already done the same, and (b) was known by her to have done so.

Utilizing features analogous to a buy-sell arrangement, the asymmetrical escrow system allows a party, upon her arrival at an independent valuation, to effectively compel her adversary, out of self-interest, to do the same.³¹ And it will be observed that the system is not limited to use within the context of bargaining over a monetary term: it can, for example, be used in any bargaining process over one or more terms that can be expressed numerically or as a proper noun, including a percentage figure, a date or time for performance, rights to or within a geographic region, a unit of weight or distance, or the selection of an individual or entity. And it can, since it is an escrow system, be used in any situation where the initiating party is able to identify a third-party who could not be rationally rejected as untrustworthy by her adversary, with the result that it can be used to regulate and resolve disputes between citizens of different states, and between sovereign states themselves.

The purpose of this paper, however, has not been to consider all of the potential applications of an asymmetrical escrow system, or to fully map out its analytical foundations and implications. It has rather been to simply introduce the system by comparing it with a few other systems, with the hope that this might shed light on some of its features and suggest some practical implications with respect to bargaining mechanism design. In this regard the goals of the author will have been met if the reader takes away three basic points. First, that a bargaining system does not have to be symmetrical in order to be fair and useful, and arguably may have to be asymmetrical in order to function effectively in the real world. Second, that a bargaining arrangement need not have, and arguably must not have, dispute resolution as its immediate goal in order to generate dispute

³¹ It is self-evident that, as with buy-sell arrangements, a party's ability to use an asymmetrical arrangement will be enhanced if its use has been provided for in a pre-existing arrangement, such as where it has been provided for in a contract entered into between the parties prior to the time at which the dispute arose, or provided for within a set of policies dictated by an employer. Such provisions could, for example, identify in advance the party who should initiate the use of the system, and/or simply provide that, if either party used it and the use did not produce a settlement, then the dispute would be resolved by having an arbitrator determine which party had proposed the more reasonable outcome, imposing that outcome and awarding costs and legal fees to the party who had proposed it. If such provisions are thoughtfully crafted and both parties are rational, then (1) fewer disputes will arise, and (2) any dispute that does arise will almost always be resolved efficiently through the use of an asymmetrical escrow system, without the need for any arbitration or court action at all.

resolution in a significant number of cases.³² Third, that the design of any mechanism that seeks to measure or produce information about a bargainer's position must, insofar as that position may to some degree be interdependent, take full account of the interactive nature of bargaining, as addressed in the work of Schelling. This is, in turn, simply an “*echo*” of an observation made by Niels Bohr:

“...[N]o result of an experiment concerning a phenomenon which, in principle, lies outside the range of classical physics can be interpreted as giving information about independent properties of the objects, but is inherently connected with a definite situation in the description of which the measuring instruments interacting with the objects also enter essentially.”

Bohr, Niels, Atomic Physics and Human Knowledge (New York: John Wiley & Sons, Inc.) (1958), at p. 26.

³² As was noted with respect to buy-sell mechanisms (*supra*, at note 26, p. 23), the asymmetrical escrow system described herein is not, first and foremost, a dispute resolution system at all—it is a system that can be initiated and used unilaterally as a *measuring instrument* within the context of non-cooperative bargaining. Where dispute resolution is produced, it *emerges as a by-product of the measuring process itself*. The immediate goal of each party involved in a use of the system is to pursue and protect their own self-interests—in contrast to all traditional approaches to dispute resolution, the system treats the parties' pursuit of selfish interests as a source of energy to give power to the system, rather than as a set of obstacles that must be overcome in order for progress to be made.

Appendix I

(This Appendix provides a point-by-point comparison of sealed-bid arrangements with asymmetrical arrangements such as buy-sell mechanisms and the escrow mechanism described in this paper)

Sealed-Bid Mechanisms	Asymmetrical Buy-Sell and Escrow Systems
<p>Sealed-Bid Mechanisms are Alternative Dispute Resolution (“ADR”) systems. As a result, and as is the case with all ADR systems:</p> <p>(a) <i>Neither party can effectively use such a system unless both parties enter into an agreement to do so.</i></p> <p>(b) <i>A party who proposes to his adversary that they should use such a system may appear weak.</i></p> <p>(c) <i>An adversary who is invited to use such a system can justify declining to use it on the theory that agreeing to do so might create an impression of weakness.</i></p> <p>(d) <i>Each party using such a system has, and recognizes that the other side has, incentives to use the system as a posturing device, at least until the eve of trial. This allows each party to rationally decline to use it or, if he or she uses it, to justify proposing a postured outcome until the parties arrive at the eve of trial.</i></p> <p>As a result of these and other features, such systems are generally ineffective until the parties arrive at or near the eve of trial.</p>	<p>Asymmetrical systems of the type described in this paper are not ADR systems—they are measuring devices that produce dispute resolution as a by-product.</p> <p>(a) <i>A party who has arrived at a valuation can use the system unilaterally, without the other side’s consent or cooperation.</i></p> <p>(b) <i>The party who initiates it does not look weak — she has made the equivalent of a “take-it-or-leave-it” offer.</i></p> <p>(c) <i>An adversary cannot rationally decline to use the system out of a concern over appearing weak — for example, his use of an asymmetrical escrow system is not disclosed unless the dispute is resolved.</i></p> <p>(d) <i>A party who initiates the use of the system is effectively compelled by self-interest to propose a reasonable outcome at the time that she initiates the use of the system. Her adversary is thus effectively compelled by self-interest to propose a reasonable outcome prior to the arrival of the deadline. He has no rational basis for failing to do so.</i></p> <p>As a result of these and other features, these systems can be used effectively at any time, including prior to the filing of suit.</p>

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