

hess grandmasters report that, while a match may last hours, the board is set in the first few moves. Players send strategic signals early and then work for hours to implement their plan while taking account of, but not being controlled by, their opponent's moves. They relentlessly run *their* plan.

Effective negotiators also send strong strategic signals in their first few moves. Since litigators are used to weaving simple stories from complexity and constantly threading evidence through the ultimate questions for the fact finder, they are already experts at strategic planning. Those skills are the grist of a successful negotiation. The question is whether, through research, we can draw insights about negotiation strategies that can help lawyers add value for their clients in real time.

FROM ANECDOTAL MAXIMS TO BIG DATA AND ADVANCED ANALYTICS

Historically, most negotiation research has been anecdotal because real participants do not want to have a social scientist sitting in the corner coding variables for research. The result has been anecdotal maxims drawn from experience: The settlement lies at the midpoint between the first two *reasonable* offers. First numbers anchor negotiations. Take a tough position by anchoring high or low, and even late concessions take twice as long and concede half as much.

It turns out, though, that the negoti-

ation of litigated cases is more nuanced than these one-sized general rules. With advancements in technology—including smart phones—and the application of advanced analytics, computer scientists, physicists, mathematicians, sociologists, psychologists, economists,

and lawyers have been able to draw meaningful insights about human behavior using learning algorithms and neural networks. In the best-selling book Burst, Albert-Laszlo Barabasi claims, "Their conclusions are breathtaking; they provide convincing evidence that most of our actions are driven by laws, patterns, and mechanisms that in reproducibility and predictive power rival those encountered in the

natural sciences." While human behavior varies—often irrationally—it is predictable, even when irrational.

NEGOTIATIONS FOLLOW PREDICTABLE SOCIAL CONVENTIONS

The negotiation of litigated cases usually involves a dance that divides into roughly three phases. Some are tangos while others are waltzes, but effective negotiators engage in a pattern of reciprocating behavior that tests the strike price for a deal over multiple

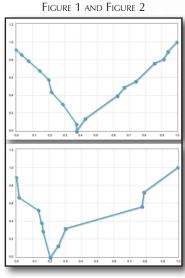
rounds. Short circuiting the negotiation dance often leaves money on the table. Figure 1 and Figure 2 show actual negotiations plotted with dollar moves coming together along the horizontal axis and time running from the start of the mediation down the vertical axis to

a deal.

Opening: Whether begun in a joint session or out of the blocks in caucus, parties tend to share information early in the round in an attempt to persuade their counterparty, or at least justify their tough po-Informational sition. asymmetries may be wider in early mediations than those occurring on the eve of trial after discovery. Damage calculations are often offered to support early

demands and offers during the opening phase of the mediation.

Middle Muddle: The middle muddle usually coincides with lunch in a full-day mediation. There isn't as much information left to share. One side probably already knows about the smoking gun that should have brought them around to the other side's case evaluation. They also know how the other side is calculating damages, or the lack of them. Still, although the parties are still divided, the ball is still moving. Nei-



ther side wants to give up until they see how sweet the deal will get, but it's not fun. To plumb the other side for their best number, they keep moving the target closer to them without going to their demand. Colloquially, they hang the meat low enough that the dog *thinks* she can get it. A pattern of reciprocating movement ensues, even if the parties are not thrilled with it. Both sides move in rough proportion (not dollar equivalents) to the other, begrudgingly.

Impatience Up, Blood Sugar Down: Later in the afternoon, impatience grows as if an alcoholic needs a drink. As blood sugar drops, non-inert or status quo decisions become more difficult. What trial lawyers know as the breakfast theory—what the judge had for breakfast may affect decisions—has been proven by empirical researchers. After looking for simple binary choices to quantify decisions, researchers settled on criminal parole outcomes because of their up or down nature. The prisoner's sentence could not be

FIGURE 3

altered. The judge had two choices—parole or not. Figure 3 depicts the parole grant rate by Israeli judges studied throughout a single day. All prisoners were *eligible* for parole, but the court had wide discretion in granting it.

Researchers studied the outcome of hundreds of cases. They found little correlation among behavioral factors, but they did find a startling correlation between parole grants and the time of day a case came on for consideration. It turns out that the judge's eating habits and metabolism apparently had more to do with parole outcomes than prisoner performance.

So, imagine you are handcuffed in the docks with dozens of other prisoners awaiting the call of your case. You've really shown reform and have been the model prisoner. The prisoner to your right has not been bad, but he has not gone out of his way to comply with the in-house rules. You anticipate that your case should be more favorably reviewed than your neighbor's—such overconfidence imbues the decisions of the most highly trained people, including lawyers.

Your neighbor's case is called early in the morning. It looks close, but he is

LAWYERS IN LEGAL NEGOTIATIONS ARE ALSO VERY PREDICTABLE. NOT ONLY DO THEIR EARLY MOVES TELEGRAPH WHERE THEY ARE HEADED WHEN MATCHED TO HISTORICAL PATTERNS, BUT THEIR PACE OF PLAY IS ALSO PREDICTABLE.

paroled. Your hopes rise—if he made it, you surely will, too. But the morning drags on as the judge listens to similar facts in dozens of cases. The judge appears to be getting weary of the same story, as her attention wanders. You notice she seems to be granting fewer paroles as we get closer to the lunch break. As much as you want her to get to your case, you'd rather she eat a snack or at least drink some coffee before she does. Alas, it's 11:30, and the bailiff calls your case. The state doesn't contest your

good behavior much, yet the judge seems to be fading. She is clearly ready for a break. Then it comes—denied! Oh no. Why couldn't your case have come up after lunch, when grant rates return to morning levels? Could it be that

random? In fact, it's predictable—not random at all.

Negotiators aren't much different. As the hours tick away, the negotiator often expresses frustration that the other side has taken too long to concede too little, but we still want to get this over with today (tonight). But we've been reasonable. They need to move. Buyer's remorse has set in—both sides have moved more than they wanted to already. Since everyone can see a deal by now, no one wants to pull the plugvet. But both sides make smaller concessions in quicker succession to telegraph to each other, "You must come to us." Closing is hard work that often requires a variety of mediator tools. But the board is set much earlier.

THE FIRST FEW MOVES SET THE BOARD— LIKE CHESS

While much emphasis is placed on closing techniques—especially for mediators since our grades depend on a deal—the cake is baked much earlier in the round. No amount of frosting will help a cake that didn't properly bake earlier in the day. And the best closing technique is unlikely to settle a case that didn't start on the road to success—or get there in a couple of rounds.

Anchoring is Important: You've heard the research on anchors. Opening numbers are important. Studies show amateurs and experts being manipulated by changes in listing prices on real estate. Anchors work best when there are informational disparities. After discovery and expert reports, they hold less sway. Since anchoring is part of the social convention of negotiation, it varies by venue. We're expected to put more spin on the numbers in certain venues, and even within a particular geographic bar there are substantial variations by case type. The questions that weigh on everyone's mind are "Will this thing settle? How much will they pay (or how little with they accept)?"

Patterns Emerge From Large Data Sets: It turns out that humans are predictable, really predictable. The National Security Agency wants our cell phone data because the phone companies can predict where we'll be tomorrow with 93% accuracy. Make a credit card charge outside of your established pattern, and you'll get a text or call from the bank within seconds.

Lawyers in legal negotiations are also very predictable. Not only do their early moves telegraph where they are headed when matched to historical patterns, but their pace of play is also predictable. PictureItSettled.com has spent years building a system of neural networks and learning algorithms that compare each move in a legal negotiation to more than 15,000 other cases (a much larger data set than a clinical trial).

After a few moves, the system can predict your opponent's next move within minutes and dollars. Armed with that information, you will know with high certainty where the other side is headed before they get there. Much less guess work. You can fine-tune your strategy to subtly affect the pace of concessions and the eventual outcome.

Of course, there is no cookie-cutter way to negotiate a case, but the larger the data set, the smaller the chances become that someone has an untried pattern that works. PictureItSettled.com has studied lawyer negotiating behavior and has drawn some critical, and often counter-intuitive, insights.

Extreme Positions Sometimes Pay Off But Don't Work Most of the Time: The data indicate that taking an extreme position early in a negotiation sometimes pays off, but much more often it results in impasse or sudden drops to avoid impasse that end up conceding more than a strategic concession plan would have produced. Holding an extreme position too long and then conceding at the last minute can leave 15% or more on the table. That's \$150,000 in a \$1-million claim. This insight flies in the face of the conventional wisdom and mythology of legal negotiation.

The definition of an extreme negotiating position, however, varies by venue, claim type, and other variables. In the movie *A Civil Action*, for example, John Travolta played a lawyer whose opening offer was so outside of the social convention for such negotiations in Boston in the early 1980s (over thirtyfive times the eventual settlement) that it failed to even draw a response. The plaintiffs' lawyers and their financier had valued the case at \$25 million. Had Travolta's character had the benefit of modern analytics combing data in similar cases from the Boston area, he would have known that a 2.5 multiple was more in line with convention for the venue and case type. Had he started around \$62 million, there was a much better chance he could have landed a settlement in the \$25 million range. Instead, his 35 multiple failed to draw a response, and he and his partners lost their homes and went bankrupt pursuing the case for years to an \$8-million settlement.

Mediators Reduce Cognitive Dissonance: Experimental psychology and more recent neural mapping with fMRI machines has shown why mediation is so effective in neutralizing predictable cognitive biases that often impede direct negotiations. At a macro level, countries rarely have the generals who are conducting the war also work on peace negotiations. It's hard to lay down weapons without heavily discounting the other side's intentions. Researchers quantified the effect of reactively devaluing an enemy's propos-

als—a statement attributed to a foe is half as credible (44%) as the same statement attributed to the home team (90%). Interestingly, though, neutral third-parties enjoy credibility much closer to that of the home team (80%).

FIGURE 5

The real lawvers in A Civil Action have told me that, had a mediator been present at the settlement conference, the outcome would have been different. I use the book on which the movie is based for a law school decision analysis class and have interviewed the real lawyers in that case in putting together the materials. Extreme anchors rarely blow a round in one move, but the party making the extreme offer tends to make larger concessions afterward to avert an early impasse. So it is usually more prudent to start with an offer that is high (or low), but perceived as reasonable locally and concede less in subsequent rounds.

Variations by Venue and Case Type: What's acceptable negotiating behav-

varies. The employment bar might tolerate more anchors extreme than the construction bar in the same venue. Noneconomic ages may move the line of scrimmage out across demographic Venue matters. Our database has the tough and other seasoned

professionals bargaining in different jurisdictions and venues. We learned that venue has a large influence on negotiation strategy and behavior (as it does on verdicts). Since it takes two to tango in negotiation, errant behavior often results in collapse of the round. What works in New Jersey may not play at all in Peoria. If aggressive first offers are the local custom and you don't make one, you may frustrate progress by trying to make up lost ground the rest of the day. Conversely, extreme offers that

> aren't customary can have the chilling effect of shutting down negotiations before you get a feel for how high or low the other side will move.

> See Figure 4: When we plot final settlement figures (dark center line) against opening demands and offers (high and low hash marks), interesting patterns emerge. There are venues where the mid-

point rule of thumb is closer to the mark. There are also places where parties might compromise their position and leave money on the table—by not dancing the local dance with more extreme anchors. If the expectation is that negotiators demand several times what they are actually willing to settle for—and you don't—it may be hard to make up that difference in subsequent rounds. Conversely, if you make an over-the-top demand in a jurisdiction that doesn't dance that way, you may find yourself looking at an empty room like Travolta's character. Open too low and you'll have a hard time making it up, but open too high and you'll poison the well and risk an early impasse. Lo-

> cal mediators often moderate expectations to local custom.

Claim type matters, too, and negotiating conventions vary by claim type (Figure 5). Within the shaded boxes lie the majority of the offers and demands, but notice there are some fairly extreme moves across claim types. General rules break down in specific cases, so we match behavioral patterns rather than imposing categorical

rules. We look for an instance where a negotiator has acted like your counterparty, rather than misapplying general rules to specific facts.

PREDICTIVE ANALYTICS OFFER INSIGHT

Because software can model negotiations fifty rounds into the future (you rarely need them all), you can forecast in real time what the effect of a planned move will be on the round. Not only will the system model your adjusted course, but it will also anticipate the other side's reaction to it. Overdo it, and the odds of impasse increase. Finetune it, and you'll improve your position without unnecessarily increasing the risk of impasse. That means more deals on better terms.

Probabilistic Projections of the Negotiation Path: Hurricane forecasters combine historical data with current weather readings to forecast storm movements. They are really making a series of individual projections that are aggregated into cone-looking graphs. The forecasts get better with additional data and the cone narrows. A hurricane

FIGURE 6 AND FIGURE 7

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might have been projected come in somewhere between Florida and Texas (Figure 6) later appears to be headed for western Louisiana (Figure 7). That's news we can use. Forecasters predicted landfall for Hurricane Katrina

once

within fifteen miles two days ahead of time.

Similarly, PictureItSettled.com uses probabilistic projections to project negotiation behavior. The system models where a round is likely to end up by combining historical data with the demands and offers from the current case. These models (like Figure 8) are graphed with probabilistic cones, too. The darker colors represent the most likely settlement outcomes. Like hurricane projections, more information

increases confidence in the projections and the cones narrow. What might start as a fairly wide spread, like the Florida to Texas hurricane cones in Figure 6 and 7, narrows as additional bid data from the round are entered.

The intersection point of the two projections—plaintiffs coming from higher

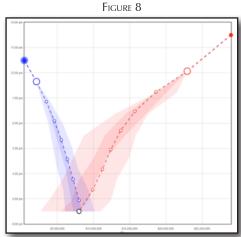
dollar figures at the right and defendants moving toward the plaintiff from the left—projects the zone of possible agreement in both money and time.

Highly Accurate Projections: Picture-ItSettled.com has published case studies on the accuracy of its projections in specific negotiations. By the second of seventeen rounds in an intellectual property case, our system projected the final settlement within 3.5% of the then-\$28.55 million spread. In another technology case, the projection was within 3% after round three. Those initial projections improved with additional information.

Insight Becomes Actionable: Accurate forecasts are insightful, but only helpful if you act on the information. Once you know where the other side is headed, you can adjust the target settlement (dot at the bottom) to improve the round without increasing the risk of impasse. The system recalculates suggested offers that will get you to the adjusted target settlement incrementally, rather than with sudden moves. Since these moves are based on successful rounds, your odds improve.

If you get too aggressive, the model will show an increased risk of impasse. By continually adjusting expectations and strategy to the current forecast, you can test whether your trial alternatives are better than the projected deal. Even small percentage improvements usually yield much better settlements. Since the strategy is informed by successful and unsuccessful historical rounds, the improvement comes without out unnecessarily increasing the risk of impasse.

Conclusion
Big data and smart analytics will



rapidly extend what experimental psychologists, behavioral economists, and other disciplines have learned about predictable if seemingly irrational human behavior. Current technology allows us to Battleship play with sonar in negotiations. Knowing with some cer-

tainty where the other side is headed in time to improve your position through a research-based, fine-tuned concession plan will improve your results. It's not a substitute for well-honed intuition developed through experience. It's an aid to test and calculate optimum positons. It's really nothing more than adding a scope to a gun so the human takes a better shot. A 5% improvement to a \$10 million case is worth \$500,000. That's worth some planning.



Don Philbin was named "Lawyer of the Year" in San Antonio by Best Lawyers® (2014, 2016), was recognized as the 2011 Outstanding Lawyer in Mediation by the

San Antonio Business Journal, is one of eight Texas lawyers listed in The International Who's Who of Commercial Mediation, and is listed in Texas Super Lawyers. He is an elected fellow of the International Academy of Mediators, the American Academy of Civil Trial Mediators, and the Texas Academy of Distinguished Neutrals. A prior version of Checkmate: Early Moves Define Negotiation Outcomes was published in NEWS FOR THE BAR (Texas Bar Litigation Section) in Spring 2015.