

Cognitive Barriers To Success In Mediation: Irrational Attachments to Positions and Other Errors of Perception That Impact Settlement Decisions¹

Definition: "Cognitive Barriers" are assessments that are unconsciously influenced by limitations in our five senses AND the way information is processed.

Type	Description	Effect/Behavior	Example
Cognitive Dissonance	When it is psychologically uncomfortable to consider information that contradicts one's viewpoint.	Tend to justify own conduct, blame others, deny, downplay, or ignore conflicting data.	
Advocacy Bias	Self-serving judgments about the likelihood of success on the merits in litigation resulting from (1) selective perception and (2) substantial time spent identifying strengths while paying insufficient attention to or discrediting weaknesses.	Where one has an interest in the outcome of a dispute, s/he is unable to make a completely objective settlement assessment.	
Assimilation Bias	Tendency of individuals to see or hear only that information that favors their position.	Behave as if adverse information was never presented to them.	
Endowment Effect	Tendency to over-value things in which one has a property interest.		The value of claims in dispute.
Certainty Bias	Overestimation of degree of certainty when assessing the probable outcomes in litigation.		Overestimate degree of certainty regarding trial results.
Egocentric Bias	Tendency to claim for themselves greater responsibility for a joint action than would be given by an outside observer.		
Inattentional Blindness	Tendency to see/hear only that which we are focused on.		Basketball/ gorilla suit observation study.

¹ Picker, Bennett G. and Relyea, Gregg.

http://www.mediate.com/articles/PR_CognitiveBarriers.cfm. January 2011.

A Sampling of the Great, Wide World of Social, Cognitive, and Memory Biases and Blindnesses That May Inform Our Views of Conflict

- **Selective Perception**
 - A term used to describe a broad range of circumstances in which people perceive some parts of their environment, but filter out or are blind to others.
- **Loss Aversion and the Endowment Effect**
 - Tendency to attach greater value to something we already possess. Tendency to feel that losses are of greater consequence than gains.
- **Reactive Devaluation**
 - The tendency to devalue the proposals because of their source, when they come from an adversary.
- **Lake Wobegon Effect (Superiority Bias)**
 - A strong tendency to view oneself as "above average" in desirable traits.
- **Trait Ascription Bias or Fundamental Attribution Error**
 - Tendency to explain others' behavior as a consequence of personal traits, but one's own behavior as a rational response to circumstance. An example of an *attributional bias*.
- **Introspection Illusion**
 - people tend to use general theories of behavior when evaluating others but use introspection when appraising themselves. People do not believe that others can be trusted to do the same: okay for me but not for thee.
- **Misinformation Effect**
 - A tendency for people to reconstruct their memories after an event to conform with false cues.
- **Omission Bias**
 - The tendency to find bad consequences more acceptable if they result from one's inaction, rather than action.
- **Ambiguity Effect**
 - The preference for the option that appears more certain over one that appears less certain.
- **Planning Fallacy**
 - The tendency to underestimate how long it will take to complete a task. An example of the "Valence Effect" (wishful thinking).
- **Bias Blind Spot**
 - The tendency to recognize cognitive biases in others, but not ourselves.

- **Outcome bias** – the tendency to judge a decision by its eventual outcome instead of based on the quality of the decision at the time it was made.
- **Planning fallacy** – the tendency to underestimate task-completion times.
- **Post-purchase rationalization** – the tendency to persuade oneself through rational argument that a purchase was a good value.
- **Pseudocertainty effect** – the tendency to make risk-averse choices if the expected outcome is positive, but make risk-seeking choices to avoid negative outcomes.
- **Reactance** – the urge to do the opposite of what someone wants you to do out of a need to resist a perceived attempt to constrain your freedom of choice.
- **Restraint bias** – the tendency to overestimate one's ability to show restraint in the face of temptation.
- **Selective perception** – the tendency for expectations to affect perception.
- **Semmelweis reflex** – the tendency to reject new evidence that contradicts an established paradigm.
- **Social comparison bias** – the tendency, when making hiring decisions, to favour potential candidates who don't compete with one's own particular strengths.
- **Status quo bias** – the tendency to like things to stay relatively the same (see also loss aversion, endowment effect, and system justification).
- **Unit bias** – the tendency to want to finish a given unit of a task or an item. Strong effects on the consumption of food in particular.
- **Wishful thinking** – the formation of beliefs and the making of decisions according to what is pleasing to imagine instead of by appeal to evidence or rationality.
- **Zero-risk bias** – preference for reducing a small risk to zero over a greater reduction in a larger risk.

Biases in probability and belief

- **Ambiguity effect** – the tendency to avoid options for which missing information makes the probability seem "unknown."

- **Anchoring effect** – the tendency to rely too heavily, or "anchor," on a past reference or on one trait or piece of information when making decisions (also called "insufficient adjustment").
- **Attentional bias** – the tendency to neglect relevant data when making judgments of a correlation or association.
- **Availability heuristic** – estimating what is more likely by what is more available in memory, which is biased toward vivid, unusual, or emotionally charged examples.
- **Availability cascade** – a self-reinforcing process in which a collective belief gains more and more plausibility through its increasing repetition in public discourse (or "repeat something long enough and it will become true").
- **Base rate neglect or Base rate fallacy** – the tendency to base judgments on specifics, ignoring general statistical information.
- **Belief bias** – an effect where someone's evaluation of the logical strength of an argument is biased by the believability of the conclusion.
- **Clustering illusion** – the tendency to see patterns where actually none exist.
- **Conjunction fallacy** – the tendency to assume that specific conditions are more probable than general ones.^[29]
- **Forward Bias** - the tendency to create models based on past data which are validated only against that past data.
- **Gambler's fallacy** – the tendency to think that future probabilities are altered by past events, when in reality they are unchanged. Results from an erroneous conceptualization of the Law of large numbers. For example, "I've flipped heads with this coin five times consecutively, so the chance of tails coming out on the sixth flip is much greater than heads."
- **Hindsight bias** – sometimes called the "I-knew-it-all-along" effect, the tendency to see past events as being predictable^[30] at the time those events happened.
- **Illusory correlation** – inaccurately perceiving a relationship between two events, either because of prejudice or selective processing of information.
- **Observer-expectancy effect** – when a researcher expects a given result and therefore unconsciously manipulates an experiment or misinterprets data in order to find it (see also subject-expectancy effect).

known as "Lake Wobegon effect," "better-than-average effect," or "superiority bias").

- **Ingroup bias** – the tendency for people to give preferential treatment to others they perceive to be members of their own groups.
- **Just-world phenomenon** – the tendency for people to believe that the world is just and therefore people "get what they deserve."
- **Moral luck** – the tendency for people to ascribe greater or lesser moral standing based on the outcome of an event rather than the intention
- **Outgroup homogeneity bias** – individuals see members of their own group as being relatively more varied than members of other groups.
- **Projection bias** – the tendency to unconsciously assume that others (or one's future selves) share one's current emotional states, thoughts and values.
- **Self-serving bias** – the tendency to claim more responsibility for successes than failures. It may also manifest itself as a tendency for people to evaluate ambiguous information in a way beneficial to their interests (see also group-serving bias).
- **System justification** – the tendency to defend and bolster the status quo. Existing social, economic, and political arrangements tend to be preferred, and alternatives disparaged sometimes even at the expense of individual and collective self-interest. (See also status quo bias.)
- **Trait ascription bias** – the tendency for people to view themselves as relatively variable in terms of personality, behavior and mood while viewing others as much more predictable.
- **Ultimate attribution error** – similar to the fundamental attribution error, in this error a person is likely to make an internal attribution to an entire group instead of the individuals within the group.

Memory errors

- **Cryptomnesia** – a form of *misattribution* where a memory is mistaken for imagination.
- **Egocentric bias** – recalling the past in a self-serving manner, e.g. remembering one's exam grades as being better than they were, or remembering a caught fish as being bigger than it was.
- **False memory** – confusion of imagination with memory, or the confusion of true memories with false memories.
- **Hindsight bias** – filtering memory of past events through present knowledge, so that those events look more predictable than they actually were; also known as the "I-knew-it-all-along effect."
- **Reminiscence bump** – the effect that people tend to recall more personal events from adolescence and early adulthood than from other lifetime periods.
- **Rosy retrospection** – the tendency to rate past events more positively than they had actually rated them when the event occurred.
- **Self-serving bias** – perceiving oneself responsible for desirable outcomes but not responsible for undesirable ones.
- **Suggestibility** – a form of *misattribution* where ideas suggested by a questioner are mistaken for memory.
- **Telescoping effect** – the effect that recent events appear to have occurred more remotely and remote events appear to have occurred more recently.
- **Von Restorff effect** – the tendency for an item that "stands out like a sore thumb" to be more likely to be remembered than other items.

Cognitive Barriers to effective negotiation and how to Overcome Them

by Dwight Golann

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Reprinted from the ADR Currents, November 2001. Published by the American Arbitration Association. This article expresses the views of the author and does not necessarily represent the view of the American Arbitration Association.

Students at Harvard are preparing to negotiate the settlement of a personal injury case. Before they begin, the students are told to make a private assessment of the plaintiff's chances of winning based on their confidential bargaining instructions. What the students don't know is that there is nothing confidential about their information: Representatives of the plaintiff and defendant have received exactly the same instructions. Since both sides have the same data, they should logically come out with the same answer—but this is not what occurs.

In fact, hundreds of law and business students told to negotiate for the plaintiff assessed her chances of winning at nearly 20% higher than did the students assigned to the defense (the figures appear on page 51). When they were asked to estimate the damages that a jury would award the plaintiff if she did win, there was a similar disparity: Plaintiff bargainers estimated her damages at almost \$100,000 higher than did the defense negotiators.

What caused these distortions? It was not that the negotiators were uninformed about the case, since they all had the same information. Nor was it due to their lack of experience: When I posed the same problem to experienced litigators in training to become mediators, a similar pattern emerged: Lawyers assigned to the plaintiff were consistently more optimistic than those assigned to the defense. Experiments in other settings also confirm the existence of an "advocacy effect" in case evaluation.

In real-life negotiations lawyers on opposing sides often arrive with sharply differing assessments of the odds of winning in court. In my experience as a mediator, the sum of these estimates commonly totals well over 100%. Even allowing for the inevitable "puffing" that occurs in bargaining, both sides honestly believe that they have a better than even chance of prevailing. These variances in perception obviously can affect the outcome of a

negotiation, since bargainers who value a case differently will find it very hard to agree as to what constitutes a "fair" settlement.

These and other hidden barriers to successful negotiation lie in the domain of cognitive psychology, the science of how people assimilate information and make decisions. This article focuses on four common cognitive obstacles that pose challenges even for experienced negotiators and mediators, and gives some practical ideas about how to overcome them.

Selective Perception

The first factor that explains the results at Harvard, as well as problems that arise in real-life bargaining, is that negotiators often miss key data in the case that would be apparent to an outsider. This phenomenon, known as "selective perception," happens in this way: Whenever we encounter a new problem, we must interpret a stream of unfamiliar, often conflicting data. We respond by instinctively forming an hypothesis about the situation, then organize what we later see and hear with the help of that image. The problem is that our hypothesis also operates as a filter, protecting us from conflicting data by automatically screening it out—which in turn reinforces the belief that our initial view was correct.

Selective perception is a universal phenomenon. Henry David Thoreau was probably thinking about it when he said, "We see only the world we look for." One typical (and embarrassing) example occurred to me and my wife around a neighbor's party invitation. We received the invitation in late June, complete with a red, white and blue border of flags and firecrackers. We arrived on the Fourth of July—only to find our neighbor's house completely empty. Back at home, we looked again at the invitation: It plainly said "Saturday July 3." But we hadn't seen the date because we already "knew" when the party would be held from glancing at the invitation's border. Selective perception affects lawyers and clients as well as partygoers.

Every piece of litigation involves a story, and lawyers usually hear only one version of that story from their client. Based on this data, they tend to form an hypothesis about the dispute. In many instances selective perception then takes over to "protect" both lawyers and clients from the dissonance of conflicting evidence. How can you address this problem?

- Don't misinterpret this behavior as intentional. If your

opponents are hobbled by selective perception, they are not consciously disregarding facts that are clear to you: Rather, they are unable to hear or see your evidence at all.

- Instead of repeating yourself, listen to the other side—then summarize what you have heard (“Let me be sure I’ve heard you right...”). You should feel free to state clearly that you disagree, as long as you make clear that you’ve heard your opponent. As a mediator, I find that litigants are often surprised and disarmed to realize that an adversary has actually listened to them. Moreover by listening, you create an implicit bargain: Your counterpart should reciprocate by listening to you.

- Ask questions focused on points that your adversary has missed, using a reasonable, let’s-review-the-pros-and-cons tone. This will usually be more effective than the aggressive questions that litigators are trained to pose. Your goal is to engage the other side in a genuine discussion.

- Supplement your presentation with visual aids. An opponent who is not able to “hear” you will sometimes respond to a chart or exhibit. As a mediator, I have seen this kind of “deafness” cured by an advocate’s deft use of exhibits. Enlarged or color documents can be especially effective for this purpose.

Optimistic Overconfidence

Assessing the value of a legal case requires predicting events that are uncertain, for example, how an unknown jury will react to evidence that may or may not be admitted. These assessments are often unreliable. For one thing, people are consistently overconfident about their ability to assess uncertain data. To demonstrate this phenomenon I sometimes ask the audience to answer a series of questions about which they are likely to know almost nothing. Almost every audience answers more than half of my questions incorrectly. For example, I might ask them, “What is the diameter of the sun?” To make it easier I tell them to pick a range of numbers wide enough apart that they have a 90% chance of being right (e.g., “10-1 billion miles” would almost certainly be correct). One would think that almost everyone would select a range that was wide enough. But most people answer with ranges that are too narrow—for example, “400,000-500,000 miles.” (The actual diameter of the sun is 861,400 miles).

Why is this? The problem is that when we don’t know something—even a fact that we aren’t expected to have at our fingertips—either we are embarrassed to admit our ignorance or simply feel a competitive urge to be right. So we give a more precise answer than our knowledge can

support: We are overconfident, in other words, about our ability to assess uncertainty.

There is a related problem. When people in an uncertain situation are asked to estimate the likelihood of a good or bad outcome, they consistently underestimate the chances of an unfavorable result. The reason, it appears, is that we like to believe that we are in control of events and thus able to bring about good results, even when we cannot.

These tendencies become even stronger when the person making the judgment acquires a personal stake in the outcome. In psychological experiments, for example, subjects who have wagered that a horse will win a race are typically more confident, both about their ability to handicap races and about the chance that their chosen horse will win, than are people who have not placed a bet.

How do these forces affect negotiations over lawsuits? Lawyers are often asked to estimate the likely outcome of court proceedings at a point when they have little basis for offering an accurate assessment. In such situations, to maintain their reputations as expert litigators and to avoid appearing ignorant to a client or another lawyer, they are likely to offer an overoptimistic estimate, and have more confidence in the correctness of their forecast than their knowledge supports. To make matters worst, both lawyers and clients “bet” on their cases by investing substantial amounts of time and money in them, thus accentuating the inherent tendency to err. How can a negotiator or mediator overcome optimistic overconfidence?

- Work to distance the “players” from their “horses” by lessening the effect of their emotional attachment to the case. Try to induce the parties to discuss the dispute as an abstract problem rather than as the matter in which they have made a large investment. Break the case down into a series of issues rather than a simple question of value; this will also encourage analysis that is less affected by wishes and emotions.

- Take the focus off this particular dispute and analyze the range of results in similar cases. What do statistics say about possible outcomes for this sort of claim? People tend to think that their own case is “special,” an exception to the rule. By discussing large numbers of disputes, it becomes easier for litigants to appreciate the likelihood that their case will follow a similar pattern.

- Before you start to negotiate, carefully list both the strong and weak points of your case and analyze them one by one. Since few advocates are willing to share an honest analysis with an adversary, this technique is useful primarily

for internal discussions with clients, and during a mediator's private caucuses with disputants.

- Consider using "decision analysis," an analytic technique that helps to expose unreasonable assumptions and identify the cumulative impact of risk. Certain clients, such as accountants, engineers and some business executives, are especially likely to appreciate this kind of hardheaded quantitative analysis.

Loss Aversion

No one likes to lose, whether the issue is money or an abstract legal argument. Recent studies have made us aware, however, of just how strongly feelings of loss can affect bargaining decisions. The results of this research require modification of one of the pillars of modern negotiation—the search for "win-win" terms. Creating interest-based bargains is certainly valuable, but it turns out to be even more important that neither side in a negotiation feel that it has "lost."

To understand the impact of loss on bargaining, consider the following experiment: Students who had expected to attend a seminar without charge were told after they arrived that because of unexpected expenses, they would each have to pay \$20. They could, however, spin a roulette wheel, with three chances in four of not having to pay the \$20 and one chance of having to pay \$100. These odds discouraged gambling: Since the average cost of spinning the wheel was \$25, the smart choice was to pay the \$20. However, a large majority of students chose to spin the wheel. Having expected to pay nothing, they apparently experienced the demand for \$20 as an unwelcome loss, and were willing to take an unreasonable risk to avoid it.

This phenomenon, known as "loss aversion," affects legal bargaining because litigants usually enter negotiations with a clear view about what is the "right" settlement in their case. In effect they carry a mental benchmark about the expected settlement value, a figure that is often distorted by optimistic overconfidence and includes recovery of their legal expenses. For example, the plaintiff in a case that is objectively valued at \$75,000 may honestly believe that it is worth \$90,000. Since he has had to pay \$25,000 in legal expenses to pursue justice, the plaintiff may have a settlement benchmark of \$115,000 in mind. The defendant, however, may well see the same case as being worth only \$60,000, even before factoring his costs of defense. In situations like this one, no settlement is possible, either through direct negotiation or mediation, unless at least one party accepts an outcome that is significantly worse

than his or her internal sense of what is fair. This inevitably produces strong feelings of loss. To avoid that loss, litigants often elect to spin the roulette wheel of litigation, even when the objective odds are against them. What can be done to prevent feelings of loss from distorting negotiators' decisions?

- Be alert for selective perception: If information will lead a party toward a result that it views as a loss, the litigant may unconsciously fail to see it at all.

- Look for settlement terms that have not previously been discussed—especially items other than money. This is helpful for two reasons: First, because the other side has probably not attached a benchmark value to them, such terms will not trigger feelings of loss. Equally important, the new terms may help to distract an opponent from any concerns about losing. Henry Kissinger is said to have remarked that his key to mediating peace agreements in the Middle East was to make deals so complicated that neither side could decide who was winning. This is a form of "win-win" bargaining, but undertaken more for the purpose of diverting people's attention from feelings of loss than for the intrinsic value of the new terms.

- Don't be overoptimistic about obtaining a deal that requires a party to trade something that he or she had expected to keep in return for a new item, even if the trade seems to produce net value for the recipient. Studies suggest that people discount the value of gains and overvalue unexpected losses. Thus, the acquisition of a dollar feels as if it is worth only about half that sum, while the unexpected loss of the same dollar feels like the expenditure of two to three dollars.

- People feel losses and gains more when they occur in a series of small steps than if they take place as a single event. (Readers who believe that it hurts less to yank a bandage off than to peel it away bit by bit will understand this intuitively.) Similarly, people tend to feel that a series of small gains are more valuable than the same total gain provided in a lump sum. (Imagine taking small mouthfuls of a favorite dessert, as opposed to gulping it in a single swallow.) As a result, if you must propose terms that the other side will experience as a loss, you should bundle them together and offer them at one time. Similarly, negotiators should unbundle "gain" terms, offering them one by one for maximum impact.

- Characterize the situation in a different way, moving the listener's internal benchmark so as to reduce his or her feeling of loss. A person's internal benchmark is often entirely subjective or based on flimsy information. Thus, changing a person's benchmark ("re-framing," as mediators call it) can be effective in overcoming resistance to

settlement.

Example: A corporation sued a supplier over an allegedly defective product. After a year of litigation, the plaintiff's vice president was discussing a defense settlement offer with his outside counsel. The offer made objective sense to the litigator in light of the company's damages and the objective risk of losing at trial, but the executive refused to consider it. He insisted that any recovery had to include not only damages, but also the nearly \$50,000 that the company had paid in legal costs to bring the case. Indeed, perhaps because he felt responsible for the decision to sue, the executive seemed to care more about recovering the legal fees than the damages themselves. The company's lawyer was in a bind because she knew that there was no basis for seeking attorneys' fees in a breach-of-warranty case.

"You need to think about this like a hard-headed businessman," she argued. "At the point you came into my office, the defendant was offering you zero. You've made an investment in this case, and you're now being offered a return on it. How does the deal look — money in versus money out? What are the pros and cons of cashing out now, versus investing more and looking for a better payout later?"

After some resistance, the executive began to talk about what should be considered the "capital" in this situation, and gradually became less emotional. Eventually, with a few "sweeteners" that obscured the money terms, he decided to take the deal.

Reactive Devaluation

Imagine that you are defense counsel in a lawsuit. Your opponent is demanding that you pay \$100,000 to settle, but appears sure that you will never agree. Now you decide to offer that sum. Is your adversary pleased? To the contrary, her first reaction is likely to be that she has undervalued the case; it must be worth more than \$100,000, because you are the enemy and would never offer a fair deal.

We all have a tendency to reject offers made by anyone we see as an adversary, a phenomenon known as "reactive devaluation." Our instinctive response to an opponent's offer is reminiscent of Groucho Marx, who vowed never to join any club that would have him as a member. How can you respond to reactive devaluation when it occurs?

- Mediators have an enormous advantage because they are not subject to this problem. Over and over again I have seen litigants approach with open minds an idea that the mediator proposes when they would instantly reject the same proposal if it came from an opponent. (Of course, if a party sees the mediator as simply transmitting an adversary's offer, reactive devaluation will apply with full force.)

- The best approach is to arrange for a mediator, or another person whom your adversary perceives as neutral, to "adopt" your offer as his or her own. This may not be feasible, however: Often disputants will not agree to mediate, and even when they do, mediators are cautious about assuming responsibility for proposals, knowing that they will lose most of their effectiveness if either side suspects them of advocating a biased solution.

- If you can't arrange for a mediator to adopt your offer, you can still gain a moral advantage by suggesting that a neutral outsider review it for fairness. Your willingness to submit to outside scrutiny will be strong evidence that you view your proposal as objectively fair.

- Another option is to discuss the pros and cons of a proposal in the abstract, without actually offering it. Like B'r'er Rabbit, who pled not to be thrown in the briar patch, your very reluctance to endorse a proposal will sometimes make it more attractive to the other side.

- In some cases it may be possible to propose two packages that have equivalent value to you, and ask your opponent to choose whichever he or she prefers.

Conclusion

Advice about negotiation often focuses on conscious strategy and tactics. In fact, some of the most important factors affecting our judgments, and those of our negotiating partners, operate beneath the surface of our minds, outside our awareness. Knowing that these forces exist, and how to deal with them, will make you a more effective negotiator.

Note: Key research into the cognitive effects discussed here was done by Daniel Kahnem and Amos Tversky. For an excellent, in-depth analysis of how cognitive obstacles influence negotiation, see Richard Birke & Craig R. Fox, "Psychological Principles in Negotiating Civil Settlements," 4 Harv. Neg. L. Rev. 1 (1999).

Cognitive Distortions in Case Evaluation

Will the plaintiff win her case?

	Plaintiff's Counsel	Defense Counsel
Harvard Business	61%	43%
Harvard Law	65%	48%

If so, what damages will she recover?

Harvard Business	\$286,000	\$189,000
Harvard Law	\$264,000	\$264,000

"Psychological Impediments to Mediation Success: Theory and Practice"

21 Ohio St. J. on Disp. Resol. 281

The article examines four psychological biases that impede mediation success: optimistic overconfidence, attribution biases, framing effects, and reactive devaluation. Each bias is broken down into its psychological elements. The author then explains how the biases impede mediation, and offers interventions mediators can take to lessen the psychological effects of the biases on mediation.

Examples of **optimistic overconfidence** are the tendencies of people to think highly of themselves, viewing their skills as above average, hold greater expectations for the future, and think they are less likely than an average person to have something bad happen to them. People with optimistic overconfidence are less willing to settle in mediation because they like their litigation chances. When a dispute involves multiple issues, each party tends to focus on the issues he or she feel most confident about and ignores issues he or she feel less confident about but might be more likely to win. Optimistic overconfidence in attorneys presents a further problem because the attorneys would like the mediator to think the attorney believes his or her party will prevail in litigation. Along the same line, attorneys focus more on facts supporting their position and overestimate their skill when informing a client of his or her chances to prevail in litigation. Cases that are unsuccessful in mediation but settle on the courthouse steps show that optimistic overconfidence is likely present in all disputes.

Three interventions that are likely to reduce the psychological effect of optimistic overconfidence in mediation were proposed. Explaining the concept of optimistic overconfidence, allowing parties to reveal particular weaknesses in caucus to bring their confidence down to more

reasonable levels, and asking parties to view the other party's argument as a judge would are ways that a mediator can help a party "de-bias" himself or herself. By allowing parties to lay out all arguments and information that might come out in court the mediator gives parties a chance to "de-bias" each other. The final proposed intervention to reduce optimistic overconfidence involves the mediator actually confronting each party with his or her weaknesses in the dispute.

Attribution biases result from attributing causal meaning to behavior. Two types of behavioral characteristics were discussed. Dispositional characteristics are particularities in character or personality that one may control but ultimately generate a negative experience, resulting in the affected party growing angry. Situational characteristics are particularities outside the party's control, and should not result in the affected party becoming less angry than he or she would from an adverse party's dispositional characteristic. However, parties often mistake situational characteristics for dispositional, called "correspondence bias" or "Fundamental Attribution Error," which results in unnecessary anger. Naturally, an increase in anger is correlated with impasse (what the author calls the "malevolent utility function"). Parties exhibiting the malevolent utility function want to prevent their opponent from gaining through settlement, which leads an angry party to reject offers he or she would normally accept absent feeling anger. Furthermore, people do not like to view themselves as the "bad" one and become angrier when others take action that affects him or her negatively. When taking action in a dispute that harms the other party, however, the acting party does so because he or she believes the other party deserves such action. That increases emotions in disputes, which leads to anger and retaliation. Attribution biases also arise from a party assuming his or her point of view is the only true point of view, and that the other side views the dispute incorrectly. The author called that belief "naive realism."

Attribution biases can make people unreasonably angry for the circumstance, and result in the absence of a bargaining zone because both parties believe their dispute must be litigated. The author proposed three ways mediators might intervene to lessen the psychological effect of attribution biases in mediation. Much like optimistic overconfidence, one approach would have the mediator explain the concept and consequences of attribution biases to the parties. A mediator might have both parties explain to each other their reasons for taking action while forbidding parties from blaming one another, and having the party that caused harm as a naive realist offer an apology. The third suggested intervention would have the mediator provide plausible explanations for the other party's behavior in caucus.

Framing effects are biases that result from a party's risk aversion. When given the choice between a certain and risky option, parties will most likely take the certain option. Framing effects impede mediation when two elements are present: the existence of both risky and riskless choices (with settlement being more riskless, and litigation more risky); and competing reference points (i.e., the expected value of adjudication). Examples of reference points include a party's financial position, and target values at which point a party chooses settlement over adjudication. Two proposed interventions to lessen the psychological effect of framing were allowing the mediator to change reference points so that each party views settlement as a gain rather than loss, and making each party aware of the transaction costs they would incur by forgoing settlement and engaging in litigation.

Reactive devaluation occurs when an offering party offers a concession, but the offeree views the offer as less desirable than had the offeror never made the offer. The author attributes this bias to reactance theory, which is basically a "grass is always greener" view of offers. Offerees might devalue offers because he or she: (1) views the offer as good for the offeror and bad for

himself or herself; (2) has a malevolent utility function where acceptance would reduce the value received; (3) hopes the offeror will concede more; or (4) thinks an attractive, but unrealistic, offer will be made. Reactive devaluation is most problematic when the bargaining range is narrow, and offers can be easily devalued to outside the bargaining range.

The author proposed four interventions to lessen the psychological effect of reactive devaluation in mediation. In one approach, the mediator "vouches" for the reasonableness of the offer if the party is devaluing due to the fear of private information or aspiration increases. Also, if a party is devaluing because he or she thinks the offer is nowhere near his or her goal, the mediator could offer his or her opinion of how close the offer actually is to what the party wants. Mediators could also propose settlement terms to prevent spiteful devaluation. Finally, mediators could make both sides evaluate possible settlements before allowing either side to make an offer. However, doing so might result in false evaluations that lead to unrealistic aspirations.