

Bluffing, agonism, and the role of overconfidence in negotiation

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Agonistic animal behaviors as a metaphor for negotiation

Animals from lobsters to gorillas routinely solve their conflicts through ritualistic displays of threat, aggression, and submission – so-called agonistic behaviors (Huber & Kravitz, 1995; Watts, 1997). Iguanid lizards impress their rivals with push-ups, expansion of a fold in the throat, and a “hobby horse” dance in which they rock their bodies and bob their heads (Evans, 1953). House mice establish hierarchy through a demonstration of “tail rattling” and “boxing” behaviors (Scott, 1966). American lobsters allocate and defend valuable nesting locations through an ordered, six stage process that includes claw-brandishing and ritualized aggression (Huber & Kravitz, 1995). Common across these behaviors, and those of many other animals, is their function of signaling the size, strength, and general physical aptitude that is presumably predictive of success in violent conflict.

What makes these behaviors so interesting to a negotiation researcher is how effective they are in preventing actual violent conflict. As an example, one multi-year field study of the agonistic behaviors of lobsters documented thousands of interactions, only 7% of which escalated to “high level aggression” (Karnofsky, Atema, & Elgin, 1989). Even in those cases, no wounds were inflicted by either animal despite the fact that they were fully capable of doing so. Conclusions from other studies are similar. Posturing and threatening behaviors typically escalate until one of the parties concedes and the pecking order is established. Across species, that decision point is almost always short of the violent attacks of which they are capable. Of course, this makes intuitive

evolutionary sense. Violent conflict is costly to all sides, and the disputants share an interest in avoiding these costs.

We present this example of conflict resolution in the animal world as an illuminating parallel to the decisions human negotiators make in pursuing the scarce resources they desire. Just as the iguanid lizard must decide how energetically to display the “hobby horse” dance, so must negotiators decide how much confidence to display at the bargaining table. They must decide how tough to talk and when to tell the other side, “I’ll see you in court.” Think of a violent fight between animals as a negotiating impasse. Unable to reach an agreement, both parties must resort to their best alternatives to a negotiated agreement (BATNA): a fight (in the event that the value of the disputed resource exceeds the expected cost of the fight to claim it) or walking away (which entails the loss of potential benefits). The agonistic displays that precede the rare fight are animals’ attempts to demonstrate the quality of their BATNAs. Larger, fitter animals are likely to win violent contests, and so engage in more impressive and more aggressive displays. By presenting the strength of their BATNAs as boldly and clearly as possible, many species are able to keep violent confrontations to a minimum while allocating scarce resources such as food and mating partners efficiently. How good are people at avoiding the high costs of aggressive confrontation?

It is easy to argue that, as a species, humans don’t quite do as well as lobsters. Our history is replete with wars, strikes, and epic legal conflicts. Our court system can barely handle the volume of cases brought before it, despite the fact that perfectly rational disputants would always prefer to settle before incurring the enormous costs of a court battle (Priest & Klein, 1984). Just as the majority of agonistic lobster encounters are

resolved without the use of force, rational states should rarely engage in costly violent conflict. Consequently, all parties would be wise to assess their relative strengths and concede if victory is unlikely.

Dominic Johnson has argued that overconfidence explains our high rate of aggressive confrontation (Johnson, 2004). In his book *Overconfidence and War*, Johnson observes that world leaders drive their nations into armed conflicts as a consequence of their positive illusions. Johnson points out that the presence of so many nations on the losing side of armed conflicts suggests that they are victims of overconfidence.

Of course, animal and human combat are just the most dramatic cases of failed negotiations leading to costly impasse. Unsigned free-agents, divorce battles, and unrealized economic trades are all inefficient outcomes that follow unsuccessful negotiations. Are humans doomed to escalate conflicts to their destructive ends because of their systematically inflated self-perceptions? Are there contexts in which overconfidence is advantageous or productive? Finally, are there ways to help negotiators more accurately assess their chances of success and to concede when it is rational to do so? In this paper, we draw from the recent work in negotiation and overconfidence to explore the answers to these questions.

What do we mean by overconfidence?

At the outset, we want to be precise regarding what we mean by “overconfidence.” The term has been used in different ways with significantly different meanings and operationalizations to describe related but distinct phenomena. Moore and

Healy (2008) distinguish three varieties of overconfidence: overprecision, overestimation, and overplacement.

Overprecision describes the tendency to be too certain about the accuracy of one's knowledge. When people indicate how sure they are of their knowledge by specifying confidence intervals, the intervals are usually too small, implying people are more sure of themselves than they ought to be (Soll & Klayman, 2004). 90% confidence intervals often contain the correct answers around 50% of the time (Juslin, Winman, & Hansson, 2007). Overprecision can have important consequences in negotiation, such as when negotiators fail to question the stereotypes and assumptions they bring to the bargaining table, whether they pertain to the other side's interests, negotiating style, or reservation price (Kray, Thompson, & Galinsky, 2001; Larrick & Wu, 2007; Ross & Ward, 1996).

One way that overprecision manifests itself in negotiation is in insufficient information search. Larrick and Wu (2007) show that negotiators explore the limits of the bargaining zone asymmetrically, leaving some types of assumptions untested. Specifically, they found that when one party is conservative in his or her original estimate of their counterpart's reservation price, subsequent interactions rarely provide disconfirming evidence. As a result, perceptions of the bargaining zone's size are systematically biased, and negotiators fail to collect the information necessary to correct for this bias.

Overestimation, the second form of overconfidence, describes errantly positive perceptions of one's abilities, performance, strength, or potential. Negotiators who overestimate the value of their BATNAs could be accused of overestimation. There is, however, little systematic evidence of this sort of overestimation in negotiation. When

overestimation is studied on its own, research has found little evidence of systematic bias, not just in negotiation but also more generally (Krizan & Windschitl, 2007; Moore & Healy, 2008). People do often overestimate their performances on difficult tasks, but this tendency is reversed on easy tasks, and both of these errors are most parsimoniously explained by unbiased error and sensible belief updating processes (Erev, Wallsten, & Budescu, 1994).

The third variety of overconfidence, and the one most relevant to negotiation, conflict resolution, or any social contexts, is overplacement. Overplacement describes the tendency for people to judge themselves to be better than others, as in the oft-cited finding that 93% of American drivers judge themselves to be more skillful than the median driver (Svenson, 1981). Overplacement's effect on negotiation has been discussed widely, and its implications are profound (Bazerman & Neale, 1992; Lim, 1997). Negotiators who think that they are better, stronger, more patient, or more deserving than their negotiating counterparts will demand more and hold out longer (Kramer, Newton, & Pommerenke, 1993; McGillicuddy, Pruitt, & Syna, 1984; Thompson & Loewenstein, 1992; Van Kleef, De Dreu, & Manstead, 2004; Weg & Zwick, 1991). The predictable result is greater delays and higher rates of conflict: too many lawsuits, strikes, and wars (Babcock, Loewenstein, Issacharoff, & Camerer, 1995). Too much time and money is wasted going to court, too many jobs are lost, and too many soldiers die.

Some of the foundational work on biases in negotiation by Bazerman and Neale identified the basic tendency for people to think they are more virtuous and deserving than others, and also more likely to prevail in disputes (Bazerman & Neale, 1982; Neale

& Bazerman, 1985; Neale & Bazerman, 1985). This early work explained inefficiencies in negotiation outcomes by measuring and manipulating the degree to which participants held unreasonably positive views of themselves and their perspective in the negotiation. Although not framed in the language of overconfidence, these theories of self-aggrandizing perceptions are consistent with overplacement. When each negotiator at the table is too sure they are the party that need not compromise, impasse is the inevitable result. However, research has documented some notable reversals in which people display *underplacement* rather than overplacement. Evidence suggests that task difficulty is an important determinant of the direction in which people err. For example, on a relatively simple trivia quiz, participants demonstrated typical overplacement, predicting they would outscore other participants (Moore & Kim, 2003; Windschitl, Kruger, & Simms, 2003). On a difficult quiz however, they predicted lower scores for themselves than for the average participant (Moore & Swift, 2010). At first glance, these results seem difficult to reconcile with our understanding of overplacement in negotiation contexts, but there are actually a few studies that help to reconcile these competing findings.

In one study of confidence in a legal setting, participants were asked to take a plaintiff's perspective and predict the number of favorable votes a jury would render. Participants were shown either the full case as presented to the jury, or just the information that supported one side of the argument or the other. Participants hearing only the favorable evidence viewed the case as an easy win and predicted a large majority of jurors voting in their favor. Participants that heard only the evidence presented by the opposition thought their situation was much more dire and expressed lower expectations

in the jury's judgment (Brenner, Koehler, & Tversky, 1996). In both situations, participants exhibited overprecision, failing to account for the wealth of information they did not have.

Other evidence shows that negotiators also seem to be unnecessarily pessimistic when faced with the perceived difficulty of inflexible time constraints. Ignoring the fact that a deadline for one party is effectively a deadline for both parties, negotiators indicate that they feel less confident about their outcome when they are given a tight time constraint (Moore, 2004a; Moore, 2004b). Again, this reflects the consistent relationship between tasks viewed as difficult by the focal actor and findings of underplacement.

Some negotiations pit two strong rivals against each other, just as some athletic contests feature better teams. In these circumstances, the evidence suggests that all the rivals will be too confident of doing well. When each side has a strong BATNA, the flexibility to be patient, negotiating experience, and helpful legal precedent, we would expect that overconfidence will lead the contest to go on too long. When both sides are under pressure to make a deal soon, have undesirable BATNAs, and weak legal standing, we should expect that rivals will ask for too little up front and concede too quickly. But what matters in predicting a negotiator's tendency towards confidence biases are the features of the situation to which they attend. Plaintiffs listening only to the evidence offered by their counsel will likely hold out too long while those thinking only of their own time pressure will cave too quickly.

Costs of overconfidence: Impasse and Delays

Having clarified the multiple facets of overconfidence, we can now look to the costs and benefits that negotiators experience by being overconfident, in the sense of overplacement. When people make the mistake of believing that they are better than others, they will be too eager to enter into negotiations and other sorts of competitive situations because they will overestimate their chances of obtaining the results they desire by competing. They will enter negotiations too frequently, they will fight too hard, and they will hold out too long. How prevalent is this error? In some contexts, such as lawsuits, strikes and wars, there appears to be inefficiently high levels of conflict. But this is far from universal.

Indeed, there is ample evidence that many people avoid negotiating when they can do so. One of the four major responses to negotiation opportunities is avoidance (Rahim, 1983) and it is surprisingly common (Morris et al., 1998). Many people dread negotiating, not just because they dislike the process but also because they fear exploitation (Babcock & Laschever, 2007). Some evidence suggests that women in particular avoid negotiating (Babcock, Gelfand, Small, & Stayn, 2006; Bowles, Babcock, & Lai, 2007; Bowles, Babcock, & McGinn, 2005). When there are simple alternatives to negotiation, people often take them. Given the desirability of these alternatives to some potential negotiators, one threat to reaching a deal and the value it creates is not being able to get or keep both parties at the table.

In these contexts, displaying a great deal of overconfidence is unlikely to be successful. Instead, overconfident displays are likely to scare off potential negotiating partners. If Don, for instance, attempted to sell his old used car on craigslist for \$100,000, there simply wouldn't be any buyers. Buyers would sensibly assume that Don

was either crazy or recklessly ambitious, and that finding mutual agreement would be unlikely, so they would not waste their time. They would avoid the negotiation altogether. When the participation of both parties is not assumed or guaranteed, the costs of overconfidence may be even greater than otherwise by precluding any negotiation at all. Negotiators choosing a counterpart are likely to select one who signals more reasonable expectations.

Avoidance is not, however, always a simple or relatively desirable option. Under what circumstances do we observe confrontation rather than avoidance? The contexts in which we more often observe confrontation, resistance to compromise, overconfident beliefs about deservingness, and costly escalation of conflict are those in which negotiators cannot easily escape each other. In divorces, strikes, and wars, disputants' BATNA is not to walk away and make a deal with someone else; it is to accept the value of the present state of the relationship. Impasse must lead to confrontation in the court room or on the battlefield. In these situations, simple conflict avoidance is not an option and the benefits of overconfidence may be more substantial. It is indeed possible that, despite the problems created by overconfidence in negotiation, there are benefits of sufficient magnitude to offset the costs.

Benefits of overconfidence

The evidence from negotiation studies clearly shows a positive relationship between aspirations and outcomes. The more you think you deserve, the more you demand, and the more you actually get, given agreement (Blount White & Neale, 1994;

Galinsky & Mussweiler, 2001; Kimmel, Pruitt, Magenau, Konar-Goldband, & Carnevale, 1980; Moore, 2004). This fact may help account for a broad variety of findings consistent with so-called self-serving biases (Kunda, 1990; Loftus & Wagenaar, 1988). These findings suggest that people are motivated to interpret information in ways that favor them and their interests because such interpretations provide a number of benefits. First, they are flattering to the self (Dunning, 2005). Second, believing in one's own deservingness increases one's ability to advocate on behalf of one's own self-interest, both because it increases the sincerity behind attempts to persuade others and also because it makes it easier to take self-interested action while maintaining a belief that one is acting fairly (Babcock, Loewenstein, & Wang, 1995).

If, then, it is in my interest to be biased in a self-serving direction, the profound question becomes, "How much?" Should I be infinitely biased? Is it in my interest to always believe I am better, fairer, and more virtuous than every potential negotiating counterpart I come across? Do I maximize the expected value of my negotiated outcomes by believing that I should get 100% of every negotiating surplus? The answer to these questions is clearly no, because self-servingly overconfident demands at the bargaining table increases the risk of impasse, and therefore come with real costs. As with small but uppity lobsters, confident displays increase the risk that you will be challenged to fight. We cannot offer a generalized solution to finding the right amount of overconfident bravado, but we can offer two research perspectives and compare their conclusions. As we discussed above, the more negotiators ask for, the more they get, *given agreement*. But agreement is not a given in most conflicts, and disagreement is

more likely when negotiators ask for more. Furthermore, disagreement is costly. Thus there are costs to overconfidence as well as benefits.

Evidence suggests that in complex environments in which information is open to multiple interpretations, those costs are likely to add up (Thompson & Loewenstein, 1992). Loewenstein and Moore (2004) showed that egocentric interpretation of information led participants in a bargaining study to divergent expectations that inhibited mutually beneficial outcomes. Those participants with more information about the bargaining zone (especially if it was ambiguous) took longer to reach agreements and were more likely to finish with a costly impasse. In these cases, participants' symmetric but opposing "self-serving" biases were anything but self-serving.

Heifetz and Segev (2004) make the case in favor of "moderate toughness" being a viable strategy from an evolutionary game theoretic perspective. They acknowledge the inefficiencies that arise from self-serving biases that prevent profitable trades, but they argue that those bargainers making biased demands will benefit in the aggregate. The key assumption in their study is that any population has a distribution of negotiators with dispositional inclinations to drive a hard bargain. When two "tough" bargainers meet, opportunities will be missed due to delays and impasses, but those individuals will benefit disproportionately in the rest of their interactions. In their models, an equilibrium of biased, overconfident negotiators is shown to be evolutionarily stable across a wide range of bargaining environments.

The formidable challenge to negotiators then is to balance the advantages of confident behaviors with the liabilities of overconfident beliefs. One must be able to

claim value contested by other parties who are gauging your strength and resolve while being compromising enough to avoid impasses and attract negotiation partners.

Debiasing

Even in an environment where some level of overconfidence may be beneficial, it is useful to know how these biases can be moderated. In some of the very first work in this area, Neale and Bazerman showed that simply informing participants about the prevalence of overconfidence was sufficient to increase the number of concessions they made and improve outcomes relative to a control group (Neale & Bazerman, 1985b). Bazerman and Neale (1992) as well as others (Malhotra & Bazerman, 2007) point out the potential value in consulting with others who question your perspective and force you to consider information that could reduce your overconfidence. Gathering information, either from neutral parties or from the other side, is likely to be helpful in moderating negotiators' beliefs about what they should expect to receive. Indeed, there are a number of features of the legal system in the United States that are designed to bring disputants' views closer to one another and thereby increase their willingness to settle out of court. Before bringing a case to trial, disputants are required to share crucial pieces of information during the process of pre-trial discovery. And if these procedures increase the rate of pre-trial settlements, the result is an improvement in overall efficiency for the system. It is, on average, better for all parties, just as everyone is better off when they find ways to sustain cooperation in social dilemmas or public goods problems.

But that is a separate question from whether it is optimal for the individual to adjust his level of overconfidence when faced with an opponent who does so (or does

not). In negotiation, an inherently competitive activity, does the decision to hold beliefs unbiased by overconfidence amount to unilateral disarmament? If everyone else is overconfident then the unbiased individual is likely to ask for less, fight less energetically, and be less persuasive. The collectively unfortunate result is that some level of costly and inefficient confrontation will persist. But how can it be that we humans must settle for an equilibrium that is less efficient than that the humble lobster has achieved? Even the best human negotiators lack an advantage that lobsters possess: Most of the time, our negotiating strength is not easily observable. When one's strength is not common knowledge, the inevitable result is a high rate of extreme demands followed by the high rate of confrontations we see in human interactions..

Conclusions

When trying to summarize the relationship between overconfidence and negotiation outcomes, it becomes particularly important to distinguish between overconfident beliefs and overconfident displays (Charness, Rustichini, & van de Ven, 2011). Overconfident beliefs are those that lead actors to expect too much, too easily, too often. When both negotiators have unrealistic perceptions of the context in which they are trying to reach a deal, the evidence suggests that they will be worse off through impasses, delays, and wasteful competitive behaviors. The main tools to combat these problematic tendencies are those that help the negotiator form a more balanced perspective of the situation. Whether it is through perspective taking or structured counterfactual reasoning, it is important to consciously construct a viewpoint that incorporates all of the best information about the landscape of agreements that is likely to

exist. When negotiators do this successfully, they have the information and the perspective to claim value in situations where it is possible, while making concessions where being inflexible is destructive. Building a well-calibrated internal understanding of the negotiation landscape is central to creating positive outcomes, but it probably is not the entire story. The evidence on the benefits of overconfidence suggest that the behaviors associated with overconfidence such as brazen requests and persistence do positively affect outcomes assuming that an agreement is reached. What is unclear from the presently available research is the feasibility of engaging in an external strategy of confident displays while maintaining a balanced and rational internal understanding of the situation.

So is there hope for negotiators that seek to aggressively claim value when possible while avoiding the pitfalls of bullish behavior? The range of impasse rates across different field settings suggests that there are contextual moderators that can keep ambitious and confident negotiators balanced in their decisions. A study of civil trials in California showed dramatic differences in pre-trial offers between case types (Gross & Syverud, 1991). In that study, the frequency of cases in which the defendant made no settlement offers before going to trial ranged from 14% in vehicular negligence cases to 43% in commercial contract disputes and 60% in medical malpractice cases. This measure suggests that there are systematic differences in defendants' confidence in a trial outcome and consequent willingness to reach a pre-trial settlement. Rationally-relevant case statistics did not fully explain these differences, suggesting that psychological factors play a pivotal role.

Legal scholars have noted that plea bargains are quite common in criminal cases despite predictions based on the psychology literature above that we should expect to see biased perspectives leading to an excessive number of full trials (Covey, 2007). Like settlements in civil cases, successful plea bargains represent a relatively efficient outcome that avoids the costs of a trial and the imposition of a settlement by the court. The most recent work on this topic suggests that for the majority of cases, the costs of going to trial are so high that they regularly overshadow the value to be claimed from a favorable outcome at trial (Covey, 2007).

Thomas Schelling presents a classic game-theoretic account of bargaining in his *The Strategy of Conflict* in which he uses US-Soviet cold war relations as a (then) timely illustration (Schelling, 1960). One of the many intriguing and counter-intuitive conclusions that he reaches is that making concessions and reducing the array of alternatives can improve an actor's expected value in a wide ranging set of real world conflicts where the BATNAs are relatively undesirable. The premise is that taking such concessionary steps frees your counterpart from considering their use and preparing to respond. In Schelling's context, the salient conflict was the strategic deployment of nuclear arms. He reasoned that developing nuclear capabilities without expressed limitations immediately decreased the security of the U.S. by necessitating Soviet countermeasures. Only through a reputation of restraint and explicitly proportional response can adversaries avoid escalation and eventual impasse.

Of course, unilateral disarmament is always a risky proposition, and this is where negotiation goes beyond the mathematics of game theory. This conflict between cooperation and strength cuts to the heart of the discussion of overconfidence in

negotiations. To the extent that overconfidence prevents concessions and blinds negotiators to possible agreements, it is a liability, but given the option of being the slightly more confident party in any dyad, one would be wise to take the chance. We should be so wise as the mice, lizards, and lobsters who aggressively claim value by confidently presenting information about their strategic strengths, yet routinely come to a mutual agreement before reaching a costly and painful impasse.

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