# Playing against an *Apparent* Opponent: Liability and Litigation under Self-Serving Bias*

Claudia M. Landeo
Department of Economics, University of Alberta
Edmonton, AB T6G 2H4. Canada

Northwestern University School of Law
Chicago, Il 60611. USA
c-landeo@law.northwestern.edu

Maxim Nikitin
International College of Economics and Finance SU-HSE
Moscow. Russia
mnikitin@hse.ru

Sergei Izmalkov
New Economic School
Moscow. Russia
sizmalkov@nes.ru

April 15, 2011

KEYWORDS: Settlement; Litigation; Liability; Self-Serving Bias; Damage Caps; Asymmetric Information; Apparent Opponents; Divergent Beliefs; Motivated Anchoring; Non-Economic Damages; Non-Cooperative Games; Disputes; Pretrial Bargaining; Perfect Bayesian Equilibrium; Universal Divinity Refinement

JEL Categories: J58, J52, C72, D82

*Claudia Landeo acknowledges financial support from Northwestern University School of Law and the University of Alberta. Maxim Nikitin acknowledges financial support from the State University Higher School of Economics Research Fund (individual research grant 09-01-0100). We wish to thank Sergey Stepanov for his insightful comments. We thank George Okromchedlishvili for excellent research assistance. The usual qualifier applies.

# Extended Abstract

> *"Humans, unlike Econs, have a self-serving bias when it comes to negotiating settlements ... [W]e tend to think that ... the most likely outcome is the one that is skewed in our own favor. (After the Chicago Bears play the Green Bay Packers, ask both Bears fans and Packers fans in which direction the referees were biased.) When both sides suffer from the self-serving bias, bargaining is likely to reach an impasse, and people will spend a lot time fighting in court, sometimes ruining their lives (at least for a time)."* (Thaler and Sunstein, 2008, p. 225; emphasis added.)

In civil litigation, although most cases settle before trial, many do not settle early, and some do not settle at all. Delayed settlement or impasse causes high costs for the parties and for society. Drawing upon research in social psychology (Ross and Sicoly, 1982; Messick and Santis, 1979; Kunda, 1987, 1990),[1] Babcock et al. (1997, 1996, 1995) and Loewenstein et al. (1993) propose an explanation for impasse that rests on litigants' *self-serving* beliefs about the judicial decisions (i.e., beliefs that the court decisions will favor them).[2] Importantly, these biased expectations might reduce litigants' payoffs and social welfare.

Babcock and colleagues state that, even when parties are exposed to the same information, they will come to different conclusions about what a fair settlement would be and base their predictions of judicial behavior on their own views of what is fair. As a result, expectations of an adjudicated settlement are likely to be biased in a manner that increases the likelihood of an impasse.[3] In a series of experimental studies, Babcock et al. (1995, 1997) and Loewenstein, et al. (1993) demonstrate that subjects consistently arrive at self-serving predictions of trial outcomes, and that these self-serving predictions induce higher likelihood of disputes. Field studies also suggest that experienced labor negotiators (Babcock, et al., 1996)[4] and seasoned lawyers and judges (Eisenberg, 1994; Goodman-Delahunty, 2010) might

[1] See also Danitioso et al. (1990), Darley and Gross (1983) and Dunning et al. (1989).

[2] Priest and Klein (1984) argue that potential litigants are unable to estimate precisely the decision of a judge or jury if a case goes to trial. They show that, if both parties exhibit *non self-serving* but incorrect beliefs of the award at trial, half of the time plaintiffs will anticipate a higher judgment than defendants. Disputes will occur when the plaintiff's estimate of the award at trial exceeds the defendant's by enough to offset the incentive for settlement that is produced by risk aversion and trial costs. See also Shavell (1982).

[3] Priest and Klein (1984) would argue that the parties are drawing randomly from the same distribution of judicial preferences. In contrast, Babcock et al. (1995) suggest that they are drawing from *different* distributions.

[4] Babcock, et al. (1996) study self-serving bias using data of Pennsylvania school teachers salary negotiations. In public sector negotiations, it is common for both sides to make references to agreements in

exhibit self-serving bias and other cognitive errors.[5]

Given that self-serving bias seems to be a pervasive phenomenon, the incorporation of self-serving bias into the theoretical analysis of liability and litigation might produce more empirically-relevant predictions, and hence, might strengthen the policy implications derived from these frameworks. Although these potential benefits are evident, the theoretical literature on the topic is scarce. Our paper seeks to advance this line of research.

We present a strategic model of liability and litigation under asymmetric information about the plaintiff's losses and self-serving beliefs about the size of the total award at trial (economic and non-economic damages). Our model extends Reinganum and Wilde (1986)[6] by allowing for self-serving beliefs about the size of the award, and by studying level of care (expenditures on accident prevention) and the effects of caps on non-economic damages. We derive sufficient conditions for a unique universally-divine separating equilibrium (Banks and Sobel, 1987) under self-serving bias. To the best of our knowledge, ours is the first theoretical study of the role of self-serving bias on shaping litigation *and* liability in an environment characterized by asymmetry of information.

Our framework involves two Bayesian risk-neutral litigants, a potential injurer (defendant)[7] and a potential plaintiff. The potential injurer has the chance of choosing costly accident precautions, and the potential plaintiff has the chance to file a lawsuit in case of an accident. The dispute is originated by an act committed by the defendant, which harmed the plaintiff. We assume that only the plaintiff knows the amount of economic damages inflicted.[8] Importantly, we also assume that, in an information environment characterized

*comparable* communities. They find evidence that both sides exhibit self-serving beliefs about the comparable school districts.

[5]Eisenberg (1994) analyze a survey conducted with 205 lawyers and 150 judges involved in bankruptcy cases. This survey asked a series of questions about lawyers' fees, such as how long it takes judges to rule on fee applications and the fairness of fees. Comparison of judges' and lawyers' responses revealed self-serving bias in their questions. For instance, 60 percent of lawyers report that they always comply with fee guidelines, but judges reported that only 18 percent of attorneys always comply. A recent empirical study on lawyers' overconfidence bias in real settings (Goodman-Delahunty et al., 2010) suggests that lawyers exhibit cognitive errors and that experience does not reduce those biases. We might then infer that experienced lawyers might also exhibit self-serving bias.

[6]Reinganum and Wilde (1986) construct a signaling model of settlement and litigation between an informed plaintiff and an uninformed defendant. They find that, even when both parties share common beliefs about the likelihood of a judgment in favor of the plaintiff, asymmetric information about the damages suffered by the plaintiff is sufficient to generate disputes. See Bebchuk (1984) for a screening model of disputes under asymmetric information, and Waldfogel (1998) for a model of disputes under asymmetric information and divergent (but non self-serving) beliefs.

[7]We will use the terms *potential injurer* and *defendant* interchangeably.

[8]This assumption can be interpreted as follows. Although during bargaining, information may be ex-

by ambiguity and "unpredictability" about non-economic damages,[9] the litigants will exhibit self-serving bias in their beliefs about the size of the award at trial (i.e. the plaintiff overestimates the award and the defendant underestimates it).[10] If an accident occurs, a litigation stage begins. The potential plaintiff first decides whether to file a lawsuit. If a lawsuit is filed, then the pre-trial negotiation between the plaintiff and defendant starts. It involves a take-it-or-leave-it proposal by the informed plaintiff. An acceptance of the offer by the defendant implies an out-of-court settlement. If the defendant rejects the plaintiff's proposal, the case goes to trial. Using the court to resolve the dispute is costly to both the defendant and the plaintiff and may be subject to error.

We first study the effects of self-serving bias on liability and litigation. The litigants' unawareness of their own bias and the bias of their opponent allows us to apply the perfect Bayesian equilibrium concept. We introduce the concept of "apparent opponent"[11] to characterize the strategic environment in which litigants exhibit self-serving beliefs about the award at trial but are unaware of their own bias and the bias of the other party. In this environment, each litigant *plays a game against an apparent opponent* (i.e., the biased litigant believes that her opponent shares her beliefs). First, our results unambiguously indicate that the self-serving bias in the litigants' beliefs about the size of the award increases the likelihood of disputes. Interestingly, we find conditions under which that the self-serving bias of the defendant acts as a commitment device, allowing the defendant to get a higher expected payoff. The self-serving bias of the plaintiff, on the other hand, unambiguously reduces his expected payoff. Second, our findings suggest that the defendant's self-serving bias reduces the level of care and hence, raises the probability of an accident. Finally, we find conditions under which that litigants' self-serving bias is welfare-reducing.

We then extend our framework by introducing caps on non-economic damages, and analyze the effects of this tort reform.[12] Experimental evidence (Babcock and Pogarsky, 1999;

changed, at the end of this process there is still some residual uncertainty on the part of the defendant about the level of true economic damages. See Reinganum and Wilde (1986).

[9] Non-economic damages are primarily intended to compensate plaintiffs for injuries and losses that are not easily quantified by a dollar amount (pain and suffering, for instance). These awards have been widely criticized for being unpredictable (Economic Report of the President, 2004).

[10] "Unpredictability" of non-economic damages may also affect the beliefs of the litigants about the size of the award. As Babcock et al. (1997) suggest, self-serving bias on litigants' beliefs might be triggered by environments characterized by ambiguous information.

[11] The word "apparent" refers to "appearing as actual to the eye or mind" (*Merriam-Webster Dictionary*; http://www.merriam-webster.com/dictionary/; online search, July 23, 2009).

[12] There is a common perception that excessive non-economic and punitive damage awards promote unnecessary litigation (Danzon, 1986) and the escalation of liability insurance premiums. In an attempt to overcome some of these negative effects, several US states have implemented different kinds of tort reform

and, Pogarsky and Babcock, 2001)[13] suggests that self-serving beliefs about the award at trial are influenced by damage caps. Following these empirical regularities, we assume that the bias on litigants' beliefs about the size of the award is a function of the cap, and that this relationship depends on the size of the cap relative to the damage level. Specifically, under certain conditions, caps increase the plaintiff's bias, i.e., they act as *biasing through law* mechanisms, and increase the bias on the defendant's perception of the distribution of damages. Our results suggest that, under certain conditions, damage caps might decrease the defendant's expenditures on accident prevention (and hence, increase the likelihood of accident occurrence), and, under plausible scenarios, increase the likelihood of disputes. Hence, caps on non-economic damages might be welfare reducing. Importantly, the impact of caps on litigants' strategies *and beliefs* explains those findings.

Several policy implications follow from our analysis. First, given that asymmetric information and self-serving bias might influence pretrial bargaining outcomes, liability and filing, in separate and *combined* ways, a model of liability and litigation aimed to guide the design of public policy must encompass these two potential sources of dispute.[14] Second, our findings regarding the effects of damage caps underscore the significance of combining the strategic behavior of litigants with their potential cognitive biases for an empirically-relevant

(Sloane, 1993). Some reforms take the form of caps or limits on non-economic and punitive damage awards. Damage caps have been widely implemented in the U.S. Approximately thirty states currently employ some form of liability limits (Babcock and Pogarsky, 1999). By 2007, twenty-six states had enacted some type of caps on non-economic damages (Avraham and Bustos, 2010).

There exist as many different cap schemes as states that employ them. Some states employ a flat dollar cap, a multiplier of compensatory damages, or some combination of both. Some caps pertain to all civil cases, while others apply to certain classes of actions, such as medical malpractice or product liability. "[T]he variety of statutory damage limitations share a common feature–they circumscribe a previously unbounded array of potential trial outcomes" (Babcock and Pogarsky, 1999; p. 345). In this paper, we employ a straightforward cap, one that limits plaintiff's recovery to a specific dollar amount. i.e., reduces the maximum plaintiff's recovery.

[13]Babcock and Pogarsky (1999) analyze the effect on settlement rates of a damage cap set lower than the value of the underlying claim, using a bargaining experiment. They find that damage caps constrain the parties' judgments and produce more settlement. Pogarsky and Babcock (2001) empirically study the effects of size of the damage caps relative to the actual damage on litigation outcomes. They find that litigants' beliefs about the size of the award are affected by the cap, in case of a relatively high cap, and that this motivating anchoring generates higher likelihood of dispute and higher settlement amounts.

These studies also show that low caps (relative to the true damages) might act as *debiasing through law* mechanisms. Landeo (2009) finds that the split-awards tort reform can also act as a *debiasing through law* mechanism. See Jolls and Sunstein (2006) for a general discussion of debiasing through law. See Landeo, Nikitin, and Baker (2007) for a previous theoretical analysis of the effects of damage caps.

[14]As Shavell (1982) states, '[T]he aim [of a model] is [...] to provide a generally useful tool for thought" (p. 56).

analysis of tort reform.

# References


Avraham, R. and Bustos, A. (2010). "The Unexpected Effects of Caps on Non-Economic Damages." Mimeo, University of Texas School of Law.

Babcock, L. and Pogarsky, G. (1999). "Damage Caps and Settlement: A Behavioral Approach." *Journal of Legal Studies* 28, 341–370.

Babcock, L. and Loewenstein, G. (1997). "Explanining Bargaining Impasse: The Role of Self-Serving Biases." *Journal of Economic Perspectives* 11, 109–126.

Babcock, L., Loewenstein, G., Issacharoff, S. (1997). "Creating Convergence: Debiasing Biased Litigants." *Law and Social Inquiry* 22, 913–926.

Babcock, L., Loewenstein, G., Issacharoff, S., and Camerer, C. (1995). "Biased Judgments of Fairness in Bargaining." *American Economic Review* 11, 109–126.

Babcock, L., Wang, Xianghong, and Loewenstein, G. (1996). "Choosing the Wrong Pond: Social Comparisons in Negotiations that Reflect a Self-Serving Bias." *Quarterly Journal of Economics* 111, 1–19.

Banks, J.S. and Sobel, J. (1987) "Equilibrium Selection in Signaling Games." *Econometrica* 55, 647–661.

Bebchuk, L.A. (1984). "Litigation and Settlement under Imperfect Information." *Rand Journal of Economics* 15, 404-415.

Danitioso, R., Kunda, Z., and Fong, G.T. (1990). "Motivated Recruitment of Autobiographical Memories." *Journal of Personality and Social Psychology* 59, 229-41.

Danzon, P. (1986). "The Frequency and Severity of Medical Malpractice Claims: New Evodence." *Law and Contemporary Problems* 57, 76–77.

Darley, J.M. and Gross, P.H. (1983). "A Hypothesis-Confirming Bias in Labeling Effects." *Journal of Personality and Social Psychology* 44, 20-33.

Dunning, D., Meyerowitz, J.A., and Holzber, A.D. (1989). "Ambiguity and Self-Evaluation: The Role of Idiosyncratic Trait Definitions in Self-Serving Assessments of Ability." *Journal of Personality and Social Psychology* 57, 1082-90.

Economic Report of the President. United States Government Printing Office, Washington, 203–221, 2004.

Eisenberg, T. (1994). "Differing Perceptions of Attorney Fees in Bankruptcy Cases." *Washington University Law Quarterly* 72, 979-95.

Farmer, A. and Pecorino, P. (2002). "Pretrial Bargaining with Self-Serving Bias and Asymmetric Information." *Journal of Economic Behavior and Organization* 48, 163-176.

Goodman-Delahunty, J., Hartwig, M., Granhag, P.A., and Loftus, E. F. (2010). "Insightful or Wishful: Lawyers' Ability to Predict Case Outcomes." *Psychology, Public Policy, and Law* 16, 133–157.

Hyde, H. (1995). "Should the House Pass H.R. 988, H.R. 1058, and H.R. 956, Legal Reform Legislation?" *Congressional Digest* 74, 154–156.

Jolls, C. and Sunstein, C. (2006). "Debiasing through Law." *Journal of Legal Studies* 35, 199–241.

Kunda, Z. (1990). "The Case of Motivated Reasoning." *Psychological Bulletin* 108, 480–498.

Kunda, Z. (1987). "Motivated Inference: Self-Serving Generation and Evaluation of Causal Theories." *Journal of Personality and Social Psychology* 53, 636–647.

Landeo, C.M. (2009). "Cognitive Coherence and Tort Reform." *Journal of Economic Psychology* 6, 898-912.

Landeo, C.M., Nikitin, M., and Baker, S. (2007). "Deterrence, Lawsuits and Litigation Outcomes under Court Errors." *Journal of Law, Economics, and Organization* 23, 57-97.

Loewenstein, G., Issacharoff, S., Camerer, C., and Babcock, L. (1993). "Self-Serving Assessments of Fairness and Pretrial Bargaining." *Journal of Legal Studies* 22, 135–159.

Messick, D. and Sentis, K. (1979). "Fairness and Preference." *Journal of Experimental Social Psychology* 15, 418-34.

Pogarsky, G. and Babcock, L. (2001). "Damage Caps, Motivated Anchoring, and Bargaining Impasse." *Journal of Legal Studies* 30, 143–159.

Priest, G.L. and Klein, B. (1984). "The Selection of Disputes for Litigation." *Journal of Legal Studies* 1, 1–55.

Reinganum, J.F. and Wilde, L.L. (1986). "Settlement, Litigation, and the Allocation of Litigation Costs." *RAND Journal of Economics* 17, 557-566.

Ross, M. and Sicoly, F. (1982). "Egocentric Biases in Availability and Attribution," in Judgment under Uncertainty: Heuristics and Biases, ed. Kahneman, D., Slovic, P., and Tversky, A., 179-189. New York: Cambridge University Press.

Shavell, S. (1982). "Suit, Settlement, and Trial." *Journal of Legal Studies* 11, 55-81.

Thaler, R.H., and Sunstein, C.R. (2008). Nudge: Improving Decisions about Health, Wealth, and Happiness. New Heaven: Yale University Press.

Waldfogel, J. (1998). "Reconciling Asymmetric Information and Divergent Expectations Theories of Litigation." *Journal of Legal Studies* 51, 451–476.