International Review of Law and Economics 47 (2016) 67–75

Contents lists available at ScienceDirect

International Review of Law and Economics

Adversarial bias, litigation, and the *Daubert* test: An economic approach☆

Chulyoung Kim*

School of Economics, Yonsei University, Seoul, Republic of Korea

ARTICLE INFO

Article history:
Received 28 April 2015
Received in revised form 11 March 2016
Accepted 14 June 2016
Available online 18 June 2016

JEL classification:
C72
D82
K41

Keywords:
Litigation game
Evidence distortion
Adversarial bias
Daubert test

ABSTRACT

The last few decades have seen a dramatic shift in the admissibility of expert testimony in American courtrooms from a *laissez-faire* approach to a strict standard for admissibility, often called the *Daubert* test. The implicit rationale behind such a stringent standard for admissibility is the trier of fact's vulnerability to *adversarial bias*, which many legal scholars and practitioners assume to be rampant. Employing a standard litigation model in the literature, I demonstrate that client–expert relationships may not always exhibit adversarial bias and that a litigant may voluntarily present neutral expert testimony under certain situations. I also show that a litigant is more likely to deploy hired guns if the litigation environment is more favorable to his cause. In particular, the burden of proof assignment and the court's prior belief are shown to influence adversarial bias.

1. Introduction

Before the 1980s, courts were quite lenient toward expert testimony, allowing the trier of fact to decide the weight of the evidence if the evidence presented in the court was not compelling. Thus, the admissibility of expert testimony was not a major issue, and this approach allowed virtually all expert witnesses to testify on subject matter within their expertise.[1]

However, during the 1980s, there was considerable debate regarding the admissibility of expert testimony, especially owing to the rise of toxic tort litigation, which alleged that exposure to pharmaceuticals, pollutants, or other toxic substances (such as the herbicide Agent Orange) caused cancer, birth defects or other ailments.[2] The cases often rested largely on testimony from experts who were hired by the litigants.[3] With the increasing number of experts providing causation theories that were often dubious but helpful to their clients, legal scholars and commentators began to worry about *adversarial bias* in client–expert relationships.[4]

Since then, the Supreme Court has made a series of important decisions, beginning with *Daubert v. Merrell Dow Pharms., Inc.*,[5] which set a strict standard for the admissibility of expert testimony. Federal Rule of Evidence 702 was eventually amended in 2000, requiring experts to pass a stringent reliability test, often called the *Daubert* test, to be qualified to give testimony in court.

☆ I am grateful to the editor, Eric Helland, and William Hubbard for their valuable comments that substantially improved this paper. All remaining errors are mine.

* Tel.: +82 221236750.
E-mail address: chulyoung.kim@gmail.com

[1] See Kaye et al. (2010) for a discussion of the traditional rules for the admissibility of expert testimony.

[2] For discussions on these mass tort cases, see, for example, Angell (1997), Green (1998), Sanders (1998), and Schuck (1988).

[3] For example, the case brought by the Carmichaels against Kumho Tire Co. in 1993 rested largely on testimony from a tire failure expert. This case eventually led to the Supreme Court's decision in *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137 (1999).

[4] For a discussion on adversarial bias, see, for example, Bernstein (2008). See also *Olympia Equip. Leasing Co. v. Western Union Telegraph Co.*, 797 F.2d 370 (7th Cir. 1986) ("It is thus one more illustration of the old problem of expert witnesses who are "often the mere paid advocates or partisans of those who employ and pay them, as much so as the attorneys who conduct the suit. There is hardly anything, not palpably absurd on its face that cannot now be proved by some so-called 'experts.'"'); *E.I. du Pont de Nemours and Co., Inc. v. Robinson*, 923 S.W.2d 549 (Tex. 1995) ("[T]here are some experts who 'are more than willing to proffer opinions of dubious value for the proper fee.'").

[5] *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579 (1993). See also *Gen. Elec. Co. v. Joiner*, 522 U.S. 136 (1997) and *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137 (1999).

http://dx.doi.org/10.1016/j.irle.2016.06.001
0144-8188/

Rule 702 provides that expert testimony that would otherwise be helpful to the jury is admissible only when (i) the testimony is based on sufficient facts or data, (ii) the testimony is the product of reliable principles and methods, and (iii) the witness has applied the principles and methods reliably to the facts of the case.[6]

The history of the *Daubert* test suggests that the implicit rationale behind such a stringent standard for admissibility is the trier of fact's vulnerability to the existence of adversarial bias.[7] Proponents of the test argue that as parties to litigation have incentive to present expert testimony of dubious validity and as lay juries are incapable of discerning which side has the better case, the *Daubert* test can alleviate the problem of adversarial bias by providing attorneys with the opportunity to challenge whether the other side's proffered expert testimony is reliable.

Arguments for the *Daubert* test and adversarial bias invite the following theoretical inquiries from law and economics scholars: do client–expert relationships always exhibit adversarial bias? In other words, is it possible that litigants voluntarily present neutral, unbiased expert testimony? If so, under which situations will they do so?

The goal of this paper is to investigate these issues in a formal economic model, which is, to the best of my knowledge, the first attempt to do so in the literature. Employing a standard litigation model in the literature, I demonstrate that client–expert relationships may not always exhibit adversarial bias and that a litigant may voluntarily present neutral expert testimony under certain situations. I also show that a litigant is more likely to deploy hired guns if the litigation environment is more favorable to his cause. In particular, the burden of proof assignment and the court's prior belief influence a litigant's incentive to deploy hired guns in equilibrium.

The intuition behind a litigant's decision to voluntarily present neutral expert testimony is as follows. In equilibrium, the burden of proof is assigned to one party, and that party is required to present hard evidence for his cause to win at trial. If the litigant appoints a biased expert who is willing to distort evidence toward the cause of the litigant, the expert will suppress unfavorable evidence and reveal only favorable evidence to the court. However, employing such a biased expert is not beneficial for the litigant for two reasons. First, suppressing unfavorable evidence is not beneficial because the litigant with the burden of proof will lose at trial unless his expert reveals favorable evidence for his cause. Second, the litigant with the burden of proof is required to present hard evidence for his cause to win at trial. However, as evidence is assumed to be verifiable, an expert cannot fabricate favorable evidence. Thus, the frequency with which a biased expert presents favorable evidence at trial is equal to that with which an unbiased expert presents favorable evidence. Consequently, the litigant with the burden of proof is indifferent between a biased expert and an unbiased expert, and he may therefore voluntarily appoint an unbiased expert in equilibrium. Propositions 1 and 2 provide formal statements.

Somewhat surprisingly, despite the voluminous research articles and commentaries criticizing litigants' incentive to deploy hired guns,[8] the literature on expert evidence law has largely neglected the possibility that a litigant may voluntarily proffer unbiased expert testimony.[9] Although some scholars argue that professional experts may have an incentive to render unbiased opinions owing to ethical concern or reputation,[10] eventually, the litigant or his attorney determines whether such unbiased testimony will be heard at court, and most legal scholars and commentators seem to downplay such a possibility.[11] Moreover, the relationship between litigation environments and a litigant's incentive to present unbiased testimony has not yet been addressed in the literature. Thus, this paper contributes to the literature on expert evidence law by presenting an uninvestigated mechanism through which litigation environments influence adversarial bias, along with policy implications.

The key feature of the main model is the evidence distortion and inference problem. A suitable economic model with which to analyze this problem is the persuasion-game framework presented by Milgrom (1981). Using a seller–buyer example as an illustration, he studies the ways in which a buyer draws inferences about a product's quality in the face of a seller's incentive to conceal evidence detrimental to the sale of the product. He shows that the equilibrium is characterized by "full revelation," in which the seller reveals all relevant evidence about the product. Extending his analysis, Milgrom and Roberts (1986) study decision-making under evidence distortion by competing litigants and confirm the robustness of the full revelation phenomenon. The reason for the full revelation of relevant information in these models is that the informed party (e.g., an expert in our context) always possesses some information. If this assumption is relaxed, that is, the informed party may not possess relevant information, then the party with the information advantage may distort the evidence in equilibrium, inducing the uninformed party (e.g., a court in our context) to draw an inference about the hidden evidence. See Shin (1998), Demougin and Fluet (2008), Kim (2014, 2015), and references therein for this line of research in a litigation setting.[12] All these papers assume that

[6] Given the radical shift toward a more stringent standard for the admissibility of expert testimony, many legal scholars and practitioners disagree with it. For example, after a recent review of *Milward v. Acuity Specialty Products Group, Inc.*, 639 F.3d 11 (1st Cir. 2011), the First Circuit reversed the district court's ruling excluding causation evidence in a toxic tort case, holding that relying on the weight of the evidence constitutes a reliable scientific methodology.

[7] Bernstein (2008) defines adversarial bias as "witness bias that arises because a party to an adversarial proceeding retains experts to advance its cause" and argues that the existence of adversarial bias justifies the application of the *Daubert* test in courts' decision-making.

[8] Krafka et al. (2002) report that the most serious problem perceived by judges regarding expert evidence is that "experts abandon objectivity and become advocates for the side that hired them." The partisan nature of expert testimony proffered by litigants has been widely criticized: see, for example, Langbein (1985) (describing "systematic distrust and devaluation of expertise" by the American people), Gross (1991) ("Experts whose incomes depend on testimony must learn to satisfy the consumers who buy that testimony; those who do not will not get hired"), Bernstein (2008) ("... attorneys can shop from an almost unlimited pool of expert witnesses"), Liptak (2008) (quoting Professor William R. Freudenburg, "The legal system and the scientific method... co-exist in a way that is really hard on truth"), Mnookin (2008) ("... those witnesses who succeed in the marketplace for experts within our adversarial process will often not be those with the most knowledge or actual expertise in a particular area, but rather those whom parties believe will succeed in persuading the fact-finder"), Robertson (2010) ("Through selection, affiliation, and compensation biases, litigants make experts more favorable but less accurate compared to their base rates of accuracy in the real world"), and Haw (2012) ("If, out of one hundred experts, ninety-nine agree on a proposition, one side may call the outlier, and the other may call one of the heartland experts. This will make a real-world ratio of 99:1 appear, in the courtroom, closer to 1:1").

[9] Haw (2012) notes: "... most indictments of legal science start with the premise that expert witnesses are biased or untruthful."

[10] Sorrel (2007) reports: "When New York dermatopathologist A. Bernard Ackerman, MD, is called to testify as a medical expert witness, he refuses to know which side the lawyer represents. It is his way of remaining objective when he evaluates a case." Some experimental results present evidence showing that experts in a courtroom setting may render unbiased opinions. For example, Boudreau and McCubbins (2008) analyze experimentally the conditions under which competition between experts induces them to make truthful statements. They find that competition induces enough truth telling to allow jurors to improve their decisions, which provides some support for the game theoretic arguments raised by Milgrom and Roberts (1986) and Froeb and Kobayashi (1996), who suggest that competition between interested parties will lead to the revelation of truthful information.

[11] Bernstein (2013) notes: "The underlying problem critics identified is that attorneys seeking expert witnesses do not, and have no incentive to, pursue expertise wherever it leads. Rather, they search for an expert willing to support the litigant's position."

[12] These papers assume that the probability with which the expert observes the hidden evidence is common knowledge in the game. In contrast, in another work by Kim (2015), this probability is not common knowledge; rather, the court must infer