Bias in

LITIGATION SCIENCE
Expert Biases

– Selection
– Affiliation
– Compensation
– Hindsight
Selection

hypothetical survey of 100 experts on a given case

“clearly not valid”

“clearly valid”
Selection

hypothesical survey of 100 experts on a given case

Only 18% of the experts think it is a valid patent.

“clearly not valid”

“clearly valid”
Selection

the two experts observed by the factfinder

Half of the experts think it is valid.

“clearly not valid”

“clearly valid”
Affiliation Bias

AN EMPIRICAL EXAMINATION OF THE USE OF EXPERT WITNESSES IN THE COURTS — PART II: A THREE CITY STUDY

Daniel W. Shuman, Elizabeth Whitaker, and Anthony Champagne

ABSTRACT: The use of expert witnesses is often dominated by anecdotal evidence. This chapter provides an empirical examination of the use of expert witnesses. This study supports the view that expert witnesses are a significant factor in the outcome of cases. It finds less support for the notion that expert witnesses are always neutral.

Experts’ Opinions on Their Treatment by Lawyers

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lawyers manipulate their experts to weaken unfavorable testimony and strengthen favorable testimony</td>
<td>63 (77%)</td>
</tr>
</tbody>
</table>

*Daniel W. Shuman is a Professor of Psychology at the University of Texas at Dallas. Professor Shuman is also a member of the American Psychological Association. He is the author of several books on the topic of psychology and is a consultant to several corporate clients.

The authors wish to express their gratitude to H. H. Kaplan and Ellen Spencer, authors of the book, for their kind assistance. The study was conducted in collaboration with the Social Science Research Council, and was supported by the National Science Foundation.

WINTER 1994

Compensation Bias

“It is difficult to get a man to understand something when his salary depends upon him not understanding it!”

-Upton Sinclair
Real Life Experiment: Have plaintiff’s expert witnesses review about 600 x-rays to determine whether they had abnormalities (asbestosis), then have “independent” experts review the same files.
Comparison of “B” Readers’ Interpretations of Chest Radiographs for Asbestos Related Changes

Joseph N. Gitlin, DPM, Larry L. Cook, PA, Otho W. Lewis, MSJ, Elizabeth Santer-Meier, MD

Affiliation & Hindsight

Hindsight Bias

Ex Post ≠ Ex Ante

Determining Liability in Hindsight*

Kim A. Kamin† and Jeffrey J. Rachlinski‡

Participants in three conditions (foresight, hindsight, and a modified hindsight condition designed to ameliorate the hindsight effect) assessed whether a municipality should take, or have taken, precautions to protect a riparian property owner from flood damage. In the foresight condition, participants reviewed evidence in the context of an administrative hearing. Hindsight participants reviewed parallel materials in the context of a trial. Three quarters of the participants in foresight concluded that a flood was too unlikely to justify further precautions—a decision that a majority of the participants in hindsight found to be negligent. Participants in hindsight also gave higher estimates for the probability of the disaster occurring. The delousing procedure failed to produce any significant differences from the regular hindsight condition. The results suggest that absent an effective delousing technique, risk assessments made in foresight will be judged harshly in hindsight.

Life involves risk and danger. The potential for accidental harm looms in every environment and situation. When careless conduct causes an accident, injuring people or damaging property, the American tort system obliges a party who has negligently caused damage to pay for it. The tort system recognizes that not every accident is the product of negligence. To obtain compensation, a plaintiff suing for negligence must prove four things: (1) The defendant owed a duty of care to the plaintiff; (2) the duty was breached; (3) the breach caused (4) damage to the plaintiff (American Law Institute [ALI], 1965, p. 4). Negligence law requires that

* The authors gratefully acknowledge the support and advice of David L. Rosenhen and Barbara Treacy. Comments by Derek Koehler and three anonymous reviewers greatly improved earlier drafts. The assistance of Steve Cole, Srijna Lusthominisky, Phoebe Garfield, and Gurnar Wang was appreciated. Correspondence and requests for reprints should be addressed to Jeffrey Rachlinski, Cornell Law School, Meyers Taylor Hall, Ithaca, NY 14853-6901.
† Stanford University.
‡ Cornell Law School.

% finding breach

0% 25% 50% 75% 100%

foresight hindsight

24% 57%
Blinding in

MEDICINE
“Animal Magnetism”

Yes! I’m healed!
“Animal Magnetism”
Double Blinded, 80%
What biases does blinding prevent?

<table>
<thead>
<tr>
<th>Panel 1: Potential benefits accruing dependent on those individuals successfully blinded</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Individuals blinded</strong></td>
</tr>
<tr>
<td>-------------------------</td>
</tr>
<tr>
<td>Participants</td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td>Trial investigators</td>
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<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Assessors</td>
</tr>
</tbody>
</table>
Hróbjartsson 2013

- Systematic review of 24 studies
- "nonblinded assessors exaggerated the ... effect size by 68%."
“Symplicity”

“No clinical advancement has excited the hypertension community ... as much as renal nerve ablation via a percutaneous technique.” (Luft 2014)
“Symplicity”

- Open-Label Experiment, 92% report benefit
- Open-Label Experiment, 84% report benefit
- Is blinding possible?
- FDA: “try it.”
A Controlled Trial of Renal Denervation for Resistant Hypertension

Deepak L. Bhatt, M.D., M.P.H., David E. Kandzari, M.D., William W. O’Neill, M.D., Ralph A. Aguirre, Ph.D., John M. Flack, M.D., M.P.H., Barry T. Karrison, M.D., Martin B. Lewis, M.D., Minghui Liu, Ph.D., Laura Moser, M.D., Maikude Nengde, M.D., Sidney A. Cohn, M.D., Ph.D., Suzanne Opel, M.D., Krishnia Rocha-Singh, M.D., Raymond B. Townsend, M.D., and George L. Birkett, M.D., for the SYMPLECTIC HTN-3 Investigators

BACKGROUND
Prior blinded studies have suggested that carotid-based renal-artery denervation reduces blood pressure in patients with resistant hypertension.

METHODS
We designed a prospective, single-blind, randomized, sham-controlled trial. Patients with severe resistant hypertension were randomly assigned in a 2:1 ratio to undergo renal denervation or a sham procedure. Before randomization, patients were receiving a stable antihypertensive regimen involving maximally tolerated doses of at least three drugs, including a diuretic. The primary efficacy end point was the change in office systolic blood pressure at 6 months; a secondary efficacy end point was the change in mean 24-hour ambulatory systolic blood pressure. The primary safety end point was the composite of death, end-stage renal disease, embolic events, or perioperative complications at 1 month or new renal-artery stenosis of more than 70% at 6 months.

RESULTS
A total of 355 patients underwent randomization. The mean change in systolic blood pressure at 6 months was −44.5 ± 26.1 mm Hg in the denervation group compared with −11.7 ± 26.1 mm Hg in the sham-procedure group (P = 0.001; both comparisons of the change from baseline, for a difference of −3.29 mm Hg [95% CI, −6.89 to 2.12]). The change in 24-hour ambulatory systolic blood pressure was −6.7 ± 10.1 mm Hg in the denervation group and −4.7 ± 9.7 mm Hg in the sham-procedure group, for a difference of −2.98 mm Hg [95% CI, −6.05 to 0.19] (P = 0.052; for a difference of −3.29 mm Hg [95% CI, −6.89 to 2.12]). There were no significant differences in safety or in efficacy between the two groups.

CONCLUSIONS
This blinded trial did not show a significant reduction of systolic blood pressure in patients with resistant hypertension 6 months after renal artery denervation as compared with a sham control. (Funded by Medtronic; SYMPLECTIC HTN-3 ClinicalTrials.gov number, NCT01940523.)
Blinding in LITIGATION
BLIND EXPERTISE

Christopher Tarver Robertson

The United States spends many billions of dollars on its system of civil litigation, and expert witnesses appear in a huge portion of cases. Yet litigants select and retain expert witnesses in ways that create the appearance of biased hired guns on both sides of every case, thereby depriving factfinders of a clear view of the facts. As a result, factfinders too often arrive at the wrong conclusions, thus undermining the deterrence and compensation functions of litigation. Court-appointed experts have been widely proposed as a solution, yet it raises legitimate concerns about accuracy and bias failed to gain traction in the American adversarial system.

Drawing on the notion of blind research from the sciences and on the concept of the veil of ignorance from political theory, this Article offers a novel and feasible reform that will make it rational for self-interested litigants to present unbiased experts to factfinders. The idea is to use an intermediary to select qualified experts who will render litigation opinions without knowledge of which party is asking. The result will be greater accuracy of both expert opinions and litigation outcomes compared to both the same queue and litigation with court-appointed experts. A game theory analysis shows that the current attorney work product protections make this “blind expert” procedure a low-cost and no-risk rational strategy for litigants. This Article argues that blind expertise is a worthwhile reform for the system of medical malpractice liability in particular and may have wider application wherever litigants must rely upon the advice of potentially biased experts.

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* Copyright © 2010 by Christopher Tarver Robertson, J.D., Ph.D., Academic Fellow and Lecturer on Law, Petrie-Flom Center for Health Law Policy, Biotechnology, and Bioethics, Harvard Law School. The author thanks those who have provided comments, including Sid Backstrom, Edward Cheng, J. Glenn Cohen, Vincent Chiao, Drew Dowoon, Einer Elhauge, Steven Gadinia, D. James Greiner, Allison Hoffman, Aaron Kesselheim, Adam Kolber, Kristin Madson, Anup Malani, Abigail Moncrief, Tom McCaffery, Jamie Robertson, Ben Reif, Anthony Rustin, David Rosenblum, D. Michael Risenger, William Sages, Matthew Sanberg, J.P. Sevilla, Ganech Sharanan, Lawrence Schnirum, Gregory Schwartz, Mark Stein, Benjamin M. Stoll, Melina Wintersman, and the participants in the Health Law Workshop at Harvard Law School and the faculty workshops at several law schools. And Somani consulted on mathematical issues, and Nicholas Perrin provided research assistance. Errors are my own, and any thanks do not imply that any of these commentators endorse my proposed reforms.
Solving Hindsight Bias

- Remove the outcome data
- Obscure the litigation question
Research Questions

• Can blinding actually be implemented in a way that removes bias?

• Can those efforts be successfully communicated to the factfinder?
  – Improve litigation outcome accuracy
  – Create an incentive for litigants to do it
A Randomized, Controlled, Blinded Experiment

Mock Jurors

- Blind Expert for Plaintiff
- Blind Expert for Defendant
- Control

The Effect of Blinded Experts on Juror Verdicts

Christopher T. Robertson and David V. Yokum*

“Blind experts” have been proposed as an institutional solution to the problem of bias in expert witness testimony in litigation (Hellerstein 2010). As a result of a litigant, an interdisciplinary team, a qualified expert and party expert to review a case without knowing which side requested the opinion. This article reports an experiment that tested the hypothesis that, compared to traditional experts, “blinded experts” will be more persuasive to jurors. A national sample of mock jurors (N=752) watched an online video of a expert medical malpractice trial, including testimony from two medical experts, one of whom (or neither, in the control condition) was randomly assigned to be a blinded expert. We also manipulated whether the judge provided a special jury instruction explaining the blinding concept. Descriptively, the data suggest juror resistance to impose liability. Despite an experimental design that included expert medical care, 66 percent of the jurors favored negligence in the control condition, which represents the same mean. Blinded experts, conducting on either side, were perceived as significantly more credible, and were more highly persuasive, in that they doubled (or halved) the odds of a favorable verdict, and increased (or decreased) total damages awards by over $100,000. The increased damages awarded appears to be due to judges finding the damages awards, which increased with the blinded expert as a driver of outcome. Use of a blinded expert may be a rational strategy for litigants, even without judicial intervention in the form of special jury instructions or otherwise.

I. Background

The U.S. legal system tasks judges and jurors—both laypersons as well as experts—with resolving highly technical questions. These laypersons are asked, for example, to evaluate DNA evidence to determine whether it adequately supports a particular defendant, to determine the standard of care for human radiology, to interpret epidemiological data to determine whether a given chemical causes an observed disease, and to ascertain the state of the art in a patent suit for computer software. Thus, in both civil and criminal litigation, experts
The Effect of Blinded Expert Testimony on Juror Verdicts

Christopher T. Robertson and David V. Yokum*

"Blind expertise" has been proposed as an institutional solution to expert witness testimony in litigation (Roberts 2010). As an intermediate step in a qualified expert panel, the expert is a who disinterestedly provides an opinion. This article reports on an expert who is considered, in comparison to traditional experts, such as "blinded" experts. A national sample of mock jurors (N=275) watched a medical malpractice trial, including testimony from two medical experts, in the control condition. The expert was randomly assigned as to whether the judge provided a special jury instruction. Descriptively, the data suggest that jurors' substantive and experiential design that included expert medical care is found negligent in the control condition, which were significantly more likely to award punitive damages, in that they doubled (or halved) the award. Increased (or decreased) simulated damages awarded by the non-damages award appear to be due to the judge's ignoring their data with the blinded expert as a trial of necessity. Use of the blinded experts for negligence even without judicial intervention in the form of otherwise.

I. Background

The U.S. legal system tasks judges and juries—both laypersons and highly technical questions. This task is to determine whether the judge accepts a particular standard of care for liability. The expert may modify the testimony of an observed disease, and to its content. Thus, in both civil and

*Addresses correspondence to: Christopher T. Robertson, Department of Psychology, The University of Iowa, 140 N. Linn Street, Iowa City, IA 52242; christopher.t Robertson@uiowa.edu

Verdicts

(N = 275, p=.04)
The Effect of Blinded Expert Juror Verdicts

Christopher T. Robertson and David V. Yakon *

"Blind experts" have been proposed as an institutional reform to prevent expert witness testimony in jurisdictions (Bennett 2010). An intermediary role as a qualified expert and part of the team as a witness is provided. This article reports an expert's role in traditional experts, such as "blind experts," in a national sample of mock jurors (Kwak 2020). The effect of medical malpractice, including testimony from two medical experts, on the verdicts was examined. The study found that blinded expert witnesses are more likely to receive favor, and the data suggest that expert testimony is more persuasive. The results are consistent with the findings of other studies and provide evidence that expert testimony, when provided, can influence the outcome of cases. The study also highlights the importance of expert testimony and its role in shaping jurors' verdicts.

I. Background

The U.S. legal system relies on judges and juries to render judgments in highly technical cases. These laypersons are asked to determine whether a standard of care has been met, whether a patient has a claim for malpractice, whether a medical expert is qualified, and whether a case involves computer software. Thus, in both civil and criminal cases, expert testimony is necessary to provide laypersons with the necessary information to make informed decisions. The use of expert testimony in civil cases has been the subject of much debate, with some experts arguing that experts should be blinded to the identity of the parties involved.

Figure 1: Simulation of economic value of case (U.S. dollars) when neither side (no BE), only the plaintiff (BE PI), or only the defendant (BE Def.) has a blind expert, including defense verdicts as zeros. Outlier award values were transformed to within two standard deviations, and $500,000 economic damages were assumed. On these assumptions, the tactic of using a blind expert pays over $100,000 on average to the litigant that uses the tactic, conditional on the expert rendering a favorable, usable opinion not rebutted by a blind expert on the other side.

<table>
<thead>
<tr>
<th>Simulated Value of Case</th>
<th>BE PI (mean)</th>
<th>BE PI (median)</th>
<th>No BE (mean)</th>
<th>No BE (median)</th>
<th>BE Def. (mean)</th>
<th>BE Def. (median)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$854,408</td>
<td>$572,500</td>
<td>$709,984</td>
<td>$0</td>
<td>$603,591</td>
<td>$0</td>
</tr>
</tbody>
</table>

Blind expert worth $100k
Christopher T. Robertson
cr5@nyu.edu