

ADVERSARIAL ECONOMICS IN ANTITRUST LITIGATION: LOSING ACADEMIC CONSENSUS IN THE BATTLE OF THE EXPERTS

Rebecca Haw

ABSTRACT—The adversarial presentation of expert scientific evidence tends to obscure academic consensus. In the context of litigation, small, marginal disagreements can be made to seem important and settled issues can be made to appear hopelessly deadlocked. This Article explores this dynamic’s effect on antitrust litigation. Modern antitrust law is steeped in microeconomics, and suits rely heavily on economic expert witnesses. Indeed, expert testimony is often the “whole game” in an antitrust dispute because experts testify about dispositive issues such as the competitive effect of a business practice or the relevant boundaries of a market. And the Supreme Court has encouraged—even engineered—this delegation to economic authority. But when antitrust judges are faced with the appearance of deadlock among economic experts, they are forced to either decide the substance of the economics themselves or ask the jury to resolve it as a matter of fact. Both practices void much of the benefit of courtroom expertise. This Article examines several reforms that would make expert testimony less adversarial and evaluates their ability to better reveal the true distribution of expert opinion on an economic question. It then presents two reforms that, while preserving the adversarial structure of expert evidence, would increase the likelihood that consensus economic views prevail at trial.

AUTHOR—Assistant Professor of Law, Vanderbilt University Law School; Climenko Fellow and Lecturer on Law, Harvard Law School; J.D., Harvard Law School, 2009–2011; M.Phil., Cambridge University, 2005; B.A., Yale University, 2001. I am indebted for thoughtful comments on previous drafts to Susannah Barton Tobin, Edward K. Cheng, Luke M. Froeb, Judge Douglas H. Ginsburg, Louis Kaplow, Kathryn E. Spier, Frederick Schauer, Adrian Vermeule, and workshop participants at Harvard Law School, Duke University School of Law, University of Minnesota Law School, University of Virginia School of Law, University of Colorado Law School, Louisiana State University Law Center, Washington University Law School, Emory University School of Law, and Vanderbilt University School of Law.

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INTRODUCTION

The adversarial presentation of evidence tends to mask factual agreement between parties to a lawsuit. American trial procedure reduces points of agreement to a list of stipulations recited blandly at the close of the *real* evidence—the evidence presented in the theater of trial with live examination of witnesses and displays of physical evidence. Emphasizing disagreement can lead to better factfinding when it encourages investigation beyond the obvious or intuitive answer, which is often wrong in a typical “he said, she said” legal dispute. But when it comes to expert testimony, the value of adversity comes with a significant cost. A fact witness is meant to represent a single, often self-interested perspective, but a courtroom expert is meant to represent a larger body of knowledge; he is most convincing when he can claim to be a part speaking for the whole.¹ And if the majority of his colleagues agree about a proposition, a factfinder should want to know both the proposition and its status as the consensus view.

The adversarial presentation of expert evidence can exaggerate the importance of a minority view on a scientific question.² As long as there is some scientifically legitimate difference of opinion, one side can exploit

¹ See E. Donald Elliott, *Toward Incentive-Based Procedure: Three Approaches for Regulating Scientific Evidence*, 69 B.U. L. REV. 487, 499 (1989) (“[T]he philosophy of expert testimony is that science itself is testifying through a particular expositor of a discipline.”).

² See Samuel R. Gross, *Expert Evidence*, 1991 WIS. L. REV. 1113, 1130; Sheila Jasanoff, *What Judges Should Know About the Sociology of Science*, 32 JURIMETRICS J. 345, 354 (1992).

that difference by calling an expert from the minority side. 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 1:1.³ So the legal system can create an illusion of insoluble disagreement even if all experts are presumed to be honest, qualified, and unbiased. All scientific communities have good-faith holdouts and mavericks. Even if the split of scientific opinion on a question is not so dramatic as the divide between mavericks and mainstreamers, a judge should care about the actual distribution of opinion and which side it favors. This feature of adversarial expertise causes problems in any suit with expert witnesses. And the more an area of law demands technical reasoning, the more acute the problem is likely to be. So in antitrust, where the Supreme Court delegates both factfinding and rulemaking to courtroom economists,⁴ the problem is especially costly—and getting more so as the Court continues to expand the role of experts. Thus, antitrust litigation provides both a clear illustration of obscured expert consensus and the perfect laboratory in which to test bold or new solutions to it.

Increasingly, the Court has abandoned clumsy per se rules for determining antitrust liability, replacing them with all-things-considered inquiries that have made courtroom economics not just inevitable but often dispositive.⁵ In one sense, this is just another incarnation of the old rules-versus-standards debate, another pendulum swing from off-the-rack to tailor-made legal norms. But in another sense, the rise of standards in antitrust analysis represents a delegation of authority from law and judges to economics and economists who can more finely tune legal norms to market realities. Closely analyzing the competitive context and effects of a business practice is a task that a lay judge or jury cannot perform unaided. For these kinds of inquiries, the Supreme Court asks antitrust judges to defer to courtroom experts. And when there is disagreement among experts, the Supreme Court has viewed the consensus position as authoritative.⁶

³ Gross, *supra* note 2, at 1185; see also David E. Bernstein, *Expert Witnesses, Adversarial Bias, and the (Partial) Failure of the Daubert Revolution*, 93 IOWA L. REV. 451, 456–57 (2008) (explaining that expert “selection bias” gives the jury “a false sense that the issue is a very close one, when expert opinion actually overwhelmingly favors one side”); Christopher Tarver Robertson, *Blind Expertise*, 85 N.Y.U. L. REV. 174, 189 (2010) (“Rather than seeing a sample of expert opinions that cluster around the truth, as in the real world, in litigation the factfinder sees only two opposite extremes of expert opinion.”).

⁴ See Abbott B. Lipsky, Jr., *Antitrust Economics—Making Progress, Avoiding Regression*, 12 GEO. MASON L. REV. 163, 163–64 (2003).

⁵ See Maurice E. Stucke, *Does the Rule of Reason Violate the Rule of Law?*, 42 U.C. DAVIS L. REV. 1375, 1379 (2009).

⁶ See Thomas G. Hungar & Ryan G. Koopmans, *Appellate Advocacy in Antitrust Cases: Lessons from the Supreme Court*, ANTITRUST, Spring 2009, at 53, 54 (“[T]he court in recent years has frequently looked to the majority views of economists to help resolve antitrust issues”); see, e.g., Leegin

But since virtually every economic proposition is characterized as creating meaningful expert disagreement, antitrust judges cannot merely defer to the discipline of economics as a neutral source for unambiguous factual inputs to a rule or decision.⁷ Adversarial expertise ensures that a judge cannot easily defer to a consensus view. Judges' interventionist treatment of economic testimony in antitrust cases, a phenomenon well documented in antitrust scholarship,⁸ can be attributed, in part, to the problem of distorted expert opinion. Judges are understandably anxious about treating divergent expert economic testimony as authoritative or deserving of deference, so judges must find ways to use *Daubert* hearings and summary judgment to engage in their own first-order analysis of economic questions. The only available alternative, punting the issue to a jury, is probably no better.⁹ Both options void much of the benefit of courtroom expertise, undermining the Supreme Court's vision for antitrust as an area of law driven by sophisticated economic science.

Since antitrust provides a good illustration of the obscured-consensus problem, it may provide a great place to test solutions to it. Most proposed solutions to the general problem of dueling expert opinions focus on reforming courtroom expertise to be less adversarial. These solutions are worth examining for their potential to solve the challenges of obscured consensus in the antitrust context. But this Article also moves beyond the existing proposals by suggesting two mechanisms that would keep expert evidence adversarial and also give antitrust judges a more accurate picture of the distribution of economic opinion. First, judges in antitrust cases might simply require testimony on the consensus status of an expert opinion, either to address its admissibility or its weight. Second, one may borrow a controversial procedure from jury selection and allow each side of an antitrust suit to preemptively strike a small number of experts from their opponents' witness list, eliminating outliers and leaving only mainstream experts to testify.

Part I explains how the adversarial presentation of expertise masks consensus where it exists. Part II explains the role of economics and

Creative Leather Prods., Inc. v. PSKS, Inc., 551 U.S. 877, 889 (2007); State Oil Co. v. Khan, 522 U.S. 3, 15–18 (1997).

⁷ Cf. Catherine T. Struve, *Doctors, the Adversary System, and Procedural Reform in Medical Liability Litigation*, 72 *FORDHAM L. REV.* 943, 961 (2004) (“[T]he mere fact that experts often seemed to disagree with one another was seen by some to diminish the authority of the medical community as a whole. . . . Even if disagreement did not betoken lack of knowledge, it was seen to diminish the credence lay people gave to medical testimony.”).

⁸ See, e.g., Andrew I. Gavil, *After Daubert: Discerning the Increasingly Fine Line Between the Admissibility and Sufficiency of Expert Testimony in Antitrust Litigation*, 65 *ANTITRUST L.J.* 663 (1997); Lipsky, *supra* note 4; John E. Lopatka & William H. Page, *Economic Authority and the Limits of Expertise in Antitrust Cases*, 90 *CORNELL L. REV.* 617 (2005).

⁹ On the other hand, a jury might be no worse off in evaluating an economic expert's claim because a jury at least has the advantage of many minds. See Robertson, *supra* note 3, at 196.

economists in antitrust to show why obscured consensus is an especially large and growing problem there. Part III identifies the mistakes and incoherencies in antitrust litigation that can be attributed to the distortive effect that the adversarial process has on economic expertise. Part IV evaluates various procedural reforms for their ability to increase the likelihood that expert consensus, where it exists, gets its day in court.

I. THE ADVERSARIAL PRESENTATION OF EXPERTS MASKS CONSENSUS

The use of the adversarial system to establish scientific principles has been widely criticized.¹⁰ To say that the courtroom is no laboratory is an understatement, and the illustrations of this principle are many. Science is cumulative and is never finished, while a trial must come to an end. Scientists use expertise to draw conclusions from observations; judges and juries use deduction and intuition. Scientific discovery is the grand pursuit of truth while a lawsuit is at best the pursuit of justice and at worst an ignoble money-grab. But most indictments of legal science start with the premise that expert witnesses are biased or untruthful.¹¹ These traditional criticisms decry the financial incentives that lead witnesses to shade their testimony,¹² the aura of impartiality that insulates an expert from skepticism,¹³ and the tendency of the system to select opportunistic quacks over mainstream practitioners.¹⁴ Biased scientific experts, so the argument

¹⁰ See, e.g., Elliott, *supra* note 1, at 477–78 (“Many commentators believe that case-by-case litigation before lay judges and juries is not the best way to resolve scientific and technical controversies . . .”); Peter Huber, *A Comment on Toward Incentive-Based Procedure: Three Approaches for Regulating Scientific Evidence by E. Donald Elliott*, 69 B.U. L. REV. 513, 513 (1989) (“[T]he scientific method and the adversary system are polar opposites.”); Jasanoff, *supra* note 2, at 353 (“The adversary process is much less effective . . . in reconstructing the communally held beliefs that reasonably pass for truth in science.”).

¹¹ See, e.g., *In re Aluminum Phosphide Antitrust Litig.*, 893 F. Supp. 1497, 1499–1500, 1500 n.5 (D. Kan. 1995) (contrasting the credibility of two competing experts, noting that it was “no surprise” that the “professional stature” of an economics professor was “unequal to that of” an expert who “devoted his career to partisan adjudicatory purposes”); Stephen D. Easton, *Ammunition for the Shoot-Out with the Hired Gun’s Hired Gun: A Proposal for Full Expert Disclosure*, 32 ARIZ. ST. L.J. 465, 468–70 (2000); Richard A. Epstein, *A New Regime for Expert Witnesses*, 26 VAL. U. L. REV. 757, 758 (1992); Robertson, *supra* note 3, at 185–88.

¹² See, e.g., Gross, *supra* note 2, at 1129–32; Learned Hand, *Historical and Practical Considerations Regarding Expert Testimony*, 15 HARV. L. REV. 40, 53 (1901); Jennifer L. Mnookin, *Expert Evidence, Partisanship, and Epistemic Competence*, 73 BROOK. L. REV. 1009, 1011–12 (2008); Robertson, *supra* note 3, at 187–88.

¹³ See, e.g., Gross, *supra* note 2, at 1179 (“Judges sometimes complain that jurors attribute a ‘mystic infallibility’ to expert evidence.” (quoting *United States v. Addison*, 498 F.2d 741, 744 (D.C. Cir. 1974))); cf. Lisa C. Wood, *Court-Appointed Independent Experts: A Litigator’s Critique*, ANTITRUST, Spring 2007, at 91, 94 (“[C]ourt-appointed experts may acquire an aura of infallibility to which they are not entitled . . .”).

¹⁴ See, e.g., Peter Huber, *Junk Science in the Courtroom*, 26 VAL. U. L. REV. 723, 747 (1992).

goes, result in improper jury awards and, even more troublingly, excessive settlements induced by the specter of expert testimony.¹⁵

While bias or outright fraud may impair truthfinding in antitrust trials, the problem of dueling experts is more fundamental than what conventional wisdom allows. Heterogeneity among expert witnesses, whatever its cause, threatens to obscure a consensus position. At least some disagreement among scientific experts, even without bad faith, is virtually guaranteed because even carefully proven propositions draw dissenters within an academic community. One good way to choose from a heterogeneous set of expert opinions would be to find out if there is a consensus view and to capture its benefits of accuracy and predictability.¹⁶ To do this, the law needs a factfinding mechanism that is good at revealing consensus. The adversarial system is good at just the opposite.

A. Sources of Heterogeneity Among Expert Opinions

When experts disagree in court about a technical or scientific proposition, the most obvious explanation is the “hired gun” thesis: experts say what they are paid to say.¹⁷ This simple incentive-based notion probably has a good deal of explanatory power, and the expert fee is not the only incentive that can tempt an expert to be partial. An expert’s reputation among litigators ensures future business.¹⁸ In part, this reputation will be defined by his adherence to a party line—he may make his reputation as a regulatory hawk or a dove, or a plaintiff-side or defense-side expert.¹⁹ Experts hoping to signal themselves as hawks or doves will want to base their opinions on legal outcomes, not on science. But this can also backfire, since an expert’s reputation for intellectual honesty can go far with a judge

¹⁵ See, e.g., Robertson, *supra* note 3, at 181–84. For an economic analysis of the costs of inaccurate judgments, see Louis Kaplow, *The Value of Accuracy in Adjudication: An Economic Analysis*, 23 J. LEGAL STUD. 307 (1994).

¹⁶ For a discussion of the informational benefits of nose-counting among experts, see Adrian Vermeule, *The Parliament of the Experts*, 58 DUKE L.J. 2231 (2009).

¹⁷ For an early example of this fear, see Struve, *supra* note 7, at 963 (“[W]e are accustomed to hear of a medical prosecution and a medical defence, as if the whole duty of a medical jurist consisted in his making the best of a case, on the side for which he happens to be engaged . . .” (quoting WILLIAM A. GUY, *PRINCIPLES OF FORENSIC MEDICINE* 474 (New York, 1st Am. ed. Harper & Bros. 1845))).

¹⁸ See, e.g., SHEILA JASANOFF, *SCIENCE AT THE BAR: LAW, SCIENCE, AND TECHNOLOGY IN AMERICA* 47 (1995) (attributing one scientist’s emergence as “a leading plaintiff’s witness in cases involving claims of immunological damage from exposure to chemicals” to a \$58 million jury verdict he helped procure for railroad workers exposed to dioxin). Likewise, failure as a witness is bad for business. See John L. Solow & Daniel Fletcher, *Doing Good Economics in the Courtroom: Thoughts on Daubert and Expert Testimony in Antitrust*, 31 J. CORP. L. 489, 490 (2006) (“Being on the losing side in cases does not enhance one’s prospects for future consulting business . . .”).

¹⁹ For example, in the medical malpractice context, doctors make their reputations as patient-side or hospital-side advocates. See Gross, *supra* note 2, at 1132–33.

evaluating his status as an expert.²⁰ Additionally, the appearance of impartiality will impress a jury. Peter Huber has gone so far as to recommend that experts bolster their reputation for impartiality by precommitting to publish their opinion “regardless of whose legal interests [their] findings may favor.”²¹

How these contradictory incentives net out is an empirical question, but it seems probable that the incentives to appear objective temper, but do not eclipse, the truth shading that animates the hired gun thesis.²² This is especially true if the influences on a scientist are not entirely conscious or rational. Some bias probably comes from the very structure of a trial, as a scientist feels like part of the “team.”²³ An essay by expert economists written as a guide for other economists contemplating serving as experts observes, “[E]conomists are often regarded as members of the client’s team rather than as outsiders. . . . Thus, in our experience, there have been few boundaries to the nature of the contributions that are accepted, and even expected, of the economists.”²⁴

Although the hired gun thesis dominates the debate about dueling experts, this focus obscures another troubling source of heterogeneity among expert opinions: good-faith professional disagreement. Propositions about all scientific disciplines, especially ones likely to be relevant in litigation,²⁵ inevitably draw at least one dissenter from within the academic community.²⁶ It is too much to expect that every expert observer of complex

²⁰ Solow & Fletcher, *supra* note 18, at 490 (“The damage to one’s professional reputation that accompanies such accusations [of manipulated or unfounded testimony] can be considerable.”).

²¹ Huber, *supra* note 14, at 752 (internal quotation mark omitted) (citing RICHARD P. FEYNMAN, SURELY YOU’RE JOKING, MR. FEYNMAN! 341 (Edward Hutchings, ed., 1985) (“[T]he idea is to try to give *all* of the information to help others to judge the value of your contribution; not just the information that leads to judgment in one particular direction or another.”)).

²² See Jeffrey L. Harrison, *Reconceptualizing the Expert Witness: Social Costs, Current Controls and Proposed Responses*, 18 YALE J. ON REG. 253, 273–75 (2001). *But see* Richard A. Posner, *An Economic Approach to the Law of Evidence*, 51 STAN. L. REV. 1477, 1537–38 (1999).

²³ See Easton, *supra* note 11, at 497; John H. Langbein, *The German Advantage in Civil Procedure*, 52 U. CHI. L. REV. 823, 835 (1985); Robertson, *supra* note 3, at 185.

²⁴ Jeffrey K. MacKie-Mason & Richard A. Pfau, *Inducements to Advocacy: The Economist as Independent Expert*, in THE ROLE OF THE ACADEMIC ECONOMIST IN LITIGATION SUPPORT 207, 213–14 (Daniel J. Slottje ed., 1999); *see also* Robertson, *supra* note 3, at 185–88 (explaining the affiliation bias of experts).

²⁵ See Bernstein, *supra* note 3, at 459–63 (discussing why forensic science is especially prone to internal controversy).

²⁶ Hand, *supra* note 12, at 56 (“[T]here [is] some dispute upon almost all subjects of human inquiry”); Lipsky, *supra* note 4, at 164 (observing that “[o]f course there will never be complete unanimity” of economic opinion); Uri Shwed & Peter S. Bearman, *The Temporal Structure of Scientific Consensus Formation*, 75 AM. SOC. REV. 817, 818 (2010) (“[S]ome level of contestation is always present in science.”).

phenomena like the market, the human body, or the environment will agree on an explanation, however widely accepted that explanation is.²⁷

This should not cause us to despair about the possibility of courtroom experts making scientifically reliable claims. In all scientific disciplines, truth is defined by areas of substantial consensus that a proposition is the best available explanation for a set of observed phenomena.²⁸ The degree of agreement necessary to establish the truth of any scientific proposition is something short of unanimity. Minor or marginal disagreement does not negate the truth of a consensus position, even in the “hard” sciences. For the law to properly incorporate scientific knowledge it must recreate those points of consensus that pass for truth within the scientific community.

B. *The 99:1 Problem*

When faced with a heterogeneous pool of expert opinions, how can a judge separate the truly controversial propositions from those that are widely accepted? In other words, how can a judge learn about the distribution of opinion on a matter? For example, imagine there are 100 people who are experts in resale economics. Say 99 experts agree that the benefits of resale price maintenance (RPM) to interbrand competition outweigh its potential to facilitate cartels, while 1 expert, with unimpeachable qualifications and methodology, disagrees.²⁹ One option would be to require the parties to disclose the opinion of all 100 experts. A less labor-intensive version of the same inquiry would be to take a random sample from the 100 experts and extrapolate to the larger population of experts. Either technique could reveal that there are few outliers, but the first is often impossible, both because the exact number of experts is typically unknown (not to mention the potential problems with sorting experts from nonexperts at the margin) and because of cost.

The American system of expert evidence opts for a nonrandom version of the sampling technique: some subset of all competent experts are called as witnesses and asked for their opinion on the matter.³⁰ Thinking of trial witnesses as a sample of a larger population of potential witnesses may seem unusual. Our romantic notion of a trial shuns aggregation and extrapolation; the point of a trial is to do justice in a solitary, unique case. This romantic ideal of the individualized trial probably accounts for judicial

²⁷ This is perhaps especially true in a social science such as economics. As Jeffrey MacKie-Mason and Richard Pfau explain, “all practicing economists—or for that matter, all social scientists—know that the world of human commercial interactions is far too complex and imperfectly understood for every well-intentioned, well-trained professional[] to agree on the interpretation of the same set of facts.” MacKie-Mason & Pfau, *supra* note 24, at 207.

²⁸ See Jasanoff, *supra* note 2, at 347.

²⁹ See Gross, *supra* note 2, at 1185.

³⁰ Several scholars have described the few expert witnesses who testify in a case as a “sample” of the larger population of experts. See Bernstein, *supra* note 3, at 456; Robertson, *supra* note 3, at 189.

disdain for pure statistical evidence³¹ and quantification of standards like “reasonable doubt.”³² So, too, might we resist the idea of limiting fact witnesses to a random set of one out of one hundred people who saw an alleged tort, or saving on discovery costs by requiring disclosure of only every third e-mail in a database.

This intuition reflects a rational judgment about retail factfinding: outlying data can have crucial epistemological value.³³ We expect a good lawyer will interview all one hundred witnesses to find the one who happened to see the color of the stoplight at the time of the accident. We sift through *all* of a manager’s e-mails to find the one in which he uses racial epithets to intimidate an employee. But the expert witness plays a different factfinding role from the eyewitness or the smoking-gun e-mail. As an expert, she represents a larger body of knowledge. The expert educates the court about the state of the world not because the expert has unique knowledge but quite the opposite. She has access to a body of knowledge made up of a much larger set of thinkers, researchers, and practitioners.³⁴

Whether the sampling technique can tell us about a consensus position among heterogeneous expert opinion depends on the representativeness of the sample: it must be random and it must be large enough to produce a reliable result. The sample produced by adversarial presentation of expertise fails both criteria. The number of experts who can speak to an issue is severely limited by the rule against cumulative evidence, and the selection technique is not at all random—the parties handpick experts they believe best support their cause.³⁵

³¹ See Laurence H. Tribe, *Trial by Mathematics: Precision and Ritual in the Legal Process*, 84 HARV. L. REV. 1329, 1340–41 (1971) (introducing the famous “blue bus” hypothetical and critiquing the use of naked statistical evidence in trials). Tribe’s article set off the “blue bus” debate that still rages today. See, e.g., Dan M. Kahan, *The Economics—Conventional, Behavioral, and Political—of “Subsequent Remedial Measures” Evidence*, 110 COLUM. L. REV. 1616, 1631–32, 1650 (2010); Max Minzner, *Putting Probability Back into Probable Cause*, 87 TEX. L. REV. 913, 933, 956–57 (2009); Andrea Roth, *Safety in Numbers? Deciding When DNA Alone is Enough to Convict*, 85 N.Y.U. L. REV. 1130, 1163–64 (2010).

³² Peter Tillers & Jonathan Gottfreid, *Case Comment—United States v. Copeland*, 369 F. Supp. 2d 275 (E.D.N.Y. 2005): *A Collateral Attack on the Legal Maxim that Proof Beyond a Reasonable Doubt Is Unquantifiable?*, 5 LAW PROBABILITY & RISK 135, 135–38 (2006) (canvassing judicial hostility to quantification of “reasonable doubt”).

³³ Cf. Gross, *supra* note 2, at 1129–30 (noting that the existence of an outlier eyewitness may lead a party to concede a particular issue, while the existence of an outlier expert will lead a party to simply find a new expert).

³⁴ This may account for the ongoing use in state courts of the old *Frye* standard that emphasized “general acceptance” in admitting expert testimony. For a discussion of the continued use of *Frye*, see David E. Bernstein, *Frye, Frye, Again: The Past, Present, and Future of the General Acceptance Test*, 41 JURIMETRICS J. 385 (2001).

³⁵ See Robertson, *supra* note 3, at 184–85. Another version of the sampling problem occurs when only some of the relevant analyses are presented in the courtroom. Harvard economist Hendrik S. Houthakker recalls a case in which he debunked the opposition’s expert by pointing out that his presentation of “price spreads” was incomplete. Hendrik S. Houthakker, *Expert Testimony by*

Returning to the hypothetical breakdown of RPM experts, under the adversarial system of expertise, a plaintiff in an RPM rule of reason case will probably call the outlying economist who believes that RPM is, on balance, anticompetitive. The defendant will call one of the other ninety-nine. The defendant might want to call more to show that it is advocating the majority view, but the judge should reject this request on the basis of the testimony being cumulative and redundant, so irrelevant. The sample is probably too small (only two) and certainly nonrandom (each side handpicks to optimize its advantage). The result is an appearance of deadlocked disagreement about the competitive potential for RPM among qualified expert economists.³⁶

In practice, consensus is not as easy to hide as this simple model would suggest. The side advocating the minority view probably has higher search costs since it must look harder for experts. This process begins with paying one economist to prepare a report. If it comes out in favor of the majority perspective, the party must start again with another expert until he happens upon the outliers. But the extra cost imposed on a side advocating a minority view ought not to be exaggerated. A good lawyer will know who to ask for an outlying economic position; this process is probably not as directionless as randomly picking an expert from a mixed pool.³⁷ And a minority expert can advertise himself, either formally or informally, to reduce the cost of finding him. So it seems likely that the extra cost incurred by the minority party will not fully reflect the marginality of the opinion he seeks. Thus, the judge is more likely to hear from at least one marginal expert than two mainstream ones and so is more likely to get an impression of serious expert disagreement, even in substantially settled areas.

II. EXPERT TESTIMONY IN ANTITRUST LITIGATION

The 99:1 problem potentially arises in any trial where expert consensus is relevant, but the more an area of law relies on expert and technical arguments, the more hidden consensus can be expected to create costly errors. Since the rise of microeconomics as the dominant tool for analyzing

Economists: What Makes It Effective?, in THE ROLE OF THE ACADEMIC ECONOMIST IN LITIGATION SUPPORT, *supra* note 24, at 1, 7. The most relevant ones (and the ones that evidenced manipulation) had been left out. Houthakker observes, "When I pointed out this omission on deposition and produced an analysis of the spread in question, the defense case collapsed and a sizeable settlement was duly agreed upon." *Id.* Houthakker attributes this sampling problem to the "adversarial element" that litigation adds to economics, an otherwise "peaceful" profession. *Id.*

³⁶ This problem of manufactured disagreement can be found in journalism, where pressure to find "balance" for every story can result in exaggeration of controversy. See Robertson, *supra* note 3, at 178 (noting "the mass media's reflexive notion that there are two equally valid sides to every story").

³⁷ Robertson, *supra* note 3, at 184 ("Litigants use many devices to cherry-pick experts including litigation history, word-of-mouth, and published papers.").

competition,³⁸ antitrust has become one of the most expert-driven areas of law. It therefore provides the perfect place to observe the perils of adversarial expertise. In the last thirty years, the Supreme Court has delegated extensive authority to courtroom economists through its propagation of rule of reason analysis³⁹ and by emphasizing market structure and firm performance over questions of conduct and intent. Economic science is also invaluable in determining causation and the extent of damages from anticompetitive conduct.⁴⁰ This Part traces the ascent of economic analysis in antitrust trials to its current place of prominence and shows that in a great number of cases, determinations made by economists are dispositive. It also explains how the Supreme Court—through case law and the rules of evidence—has instructed trial judges to defer to economic consensus in answering these questions.

A. *The Role of Economics in Antitrust Law: The “Whole Game”*

Although expertise is increasingly important in all areas of the law, the rise of the economist in antitrust litigation has been especially dramatic. This can be seen in two trends: (1) the recent movement towards using the rule of reason to govern practices that used to be subject to per se liability and (2) the increasing emphasis on structure and performance rather than conduct. It is also evident in the fact that judges often have a hard time drawing the fine line between factual expert testimony (admissible) and expert testimony that goes to the law (inadmissible).⁴¹

³⁸ See, e.g., Lipsky, *supra* note 4, at 165 (“[T]he rapid assimilation of microeconomics into antitrust thinking makes almost every antitrust controversy an exercise in microeconomic analysis.”); Geoffrey A. Manne & E. Marcellus Williamson, *Hot Docs vs. Cold Economics: The Use and Misuse of Business Documents in Antitrust Enforcement and Adjudication*, 47 ARIZ. L. REV. 609, 614 & n.21 (2005) (“Today economics is the primary tool for all aspects of antitrust analysis . . .”); see also THE ANTITRUST REVOLUTION: ECONOMICS, COMPETITION, AND POLICY 1 (John E. Kwoka, Jr. & Lawrence J. White, eds., 5th ed. 2009).

³⁹ See *infra* Part II.A.1.a.

⁴⁰ Andrew I. Gavil, *Defining Reliable Forensic Economics in the Post-Daubert/Kumho Tire Era: Case Studies from Antitrust*, 57 WASH. & LEE L. REV. 831, 867–74 (2000) (“Economists also have made increasingly frequent appearances in antitrust cases as principal witnesses on damages.”). See generally Michele Molyneaux, Comment, *Quality Control of Economic Expert Testimony: The Fundamental Methods of Proving Antitrust Damages*, 35 ARIZ. ST. L.J. 1049 (2003) (providing a taxonomy of acceptable econometric methods of proving antitrust damages).

⁴¹ To see how this debate plays out in the context of antitrust summary judgment, see *Casper v. SMG*, 389 F. Supp. 2d 618 (D.N.J. 2005), *aff’d sub nom.* *Atl. Exposition Servs. Inc. v. SMG*, 262 F. App’x 449 (3d Cir. 2008); *Aventis Envtl. Sci. USA LP v. Scotts Co.*, 383 F. Supp. 2d 488 (S.D.N.Y. 2005); 2 PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION ¶ 309, at 158 (3d ed. 2007).

1. The Sherman Act: From Standards to Rules and Back

Again.—Like the Constitution and unlike most modern statutes, the Sherman Act is short and vague.⁴² And as in the constitutional context, in interpreting the Sherman Act, the Supreme Court has developed a set of more rule-like rules to effectuate its broad aspirations. For example, the Supreme Court announced in *Dr. Miles Medical Co. v. John D. Park & Sons Co.* that wholesalers selling a product to a retailer could not dictate a minimum price the retailer can charge the customer for the product.⁴³ The first half-century of the Sherman Act saw courts pushing its vague standards (no unreasonable restraints on trade) down the spectrum towards rules (no resale price maintenance).

But now, as several scholars have observed, that trend has reversed.⁴⁴ Per se rules made judges' jobs easier because they could attach liability after finding certain predicate facts (did the firm indeed enter an agreement to set the retail price?) without a more complex inquiry into the "reasonability" of the restriction. But these rules were too blunt to efficiently regulate competition. For example, the per se rule against resale price maintenance was both underinclusive and overinclusive. On the one hand, it outlawed a procompetitive use of price maintenance: promotion of interbrand competition.⁴⁵ On the other hand, because it required explicit agreement, it failed to prevent unilateral price maintenance even if the practice had anticompetitive effects.⁴⁶ This concern about per se antitrust rules led to two shifts in antitrust doctrine: the rise of the rule of reason in analyzing collusion claims and an increase in emphasis on structure and performance over conduct in analyzing exclusion.

a. The rise of the rule of reason in collusion cases.—The rule of reason is famously a misnomer;⁴⁷ in fact, it is an all-things-considered standard. The Supreme Court first articulated the standard in *Board of Trade of the City of Chicago v. United States*:

[T]he legality of an agreement or regulation cannot be determined by so simple a test, as whether it restrains competition. Every agreement concerning trade, every regulation of trade, restrains. To bind, to restrain, is of their very essence. The true test of legality is whether the restraint imposed is such as merely regulates and perhaps thereby promotes competition or whether it is

⁴² For a summary of scholarship endorsing the Sherman-Act-as-constitution metaphor, and for a full-throated critique of it, see Thomas C. Arthur, *Farewell to the Sea of Doubt: Jettisoning the Constitutional Sherman Act*, 74 CALIF. L. REV. 263 (1986).

⁴³ 220 U.S. 373 (1911), *overruled by* *Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, 551 U.S. 877 (2007).

⁴⁴ See, e.g., Daniel A. Crane, *Rules Versus Standards in Antitrust Adjudication*, 64 WASH. & LEE L. REV. 49, 55–71 (2007); Stucke, *supra* note 5, at 1407–17.

⁴⁵ *Leegin*, 551 U.S. at 889–92.

⁴⁶ *Id.* at 902.

⁴⁷ Crane, *supra* note 44, at 57.

such as may suppress or even destroy competition. To determine that question the court must ordinarily consider the facts peculiar to the business to which the restraint is applied; its condition before and after the restraint was imposed; the nature of the restraint and its effect, actual or probable. The history of the restraint, the evil believed to exist, the reason for adopting the particular remedy, the purpose or end sought to be attained, are all relevant facts.⁴⁸

Although the rule of reason was born almost a century ago, it did not gain traction until relatively recently. Beginning with *Continental T.V., Inc. v. GTE Sylvania Inc.* in 1977, the Court has steadily eroded per se liability in favor of the rule of reason.⁴⁹ In *Northwest Wholesale Stationers, Inc. v. Pacific Stationery & Printing Co.*, the Court applied the rule of reason to the exclusion of members of a trade association, a practice previously subject to per se liability.⁵⁰ A few years later, in *Business Electronics Corp. v. Sharp Electronics Corp.*, the Court overruled the per se ban on manufacturers discontinuing business with a retailer–customer after another retailer–customer complained about it deviating from the MSRP.⁵¹ Perhaps the most breathtaking reversal of a per se ban occurred recently in *Leegin Creative Leather Products, Inc. v. PSKS, Inc.*, where the Court overruled a century-old precedent subjecting resale price maintenance to per se liability.⁵² The shift from per se to rule of reason has been so complete that it has prompted the Supreme Court to describe the rule of reason as the default mode of analysis under the Sherman Act.⁵³

In cases governed by the rule of reason, a party can argue that its restriction is reasonable because of market circumstances and economic effects. In contrast, in cases governed by a per se prohibition, a defendant cannot avoid liability by justifying its restriction as efficient, fair, or procompetitive. The stakes are high in deciding whether a practice should be subject to the rule of reason or a per se ban because the choice of standard is often dispositive. If a defendant's conduct is uncontroversial, either because it acted flagrantly or because it admits to the practice, applying a per se rule means automatic liability. But less obviously, applying the rule of reason typically means automatic nonliability.⁵⁴

⁴⁸ 246 U.S. 231, 238 (1918).

⁴⁹ 433 U.S. 36, 49–59 (1977).

⁵⁰ 472 U.S. 284, 289 (1985).

⁵¹ 485 U.S. 717, 735–36 (1988); see also Crane, *supra* note 44, at 59–60.

⁵² 551 U.S. 877, 882 (2007).

⁵³ *Id.* at 894–95.

⁵⁴ Judge Posner has called the rule of reason “little more than a euphemism for nonliability.” Richard A. Posner, *The Rule of Reason and the Economic Approach: Reflections on the Sylvania Decision*, 45 U. CHI. L. REV. 1, 14 (1977). Judge Easterbrook has argued that saying a practice is subject to the rule of reason is, practically, tantamount to saying that it is per se legal. Frank H. Easterbrook, *Allocating Antitrust Decisionmaking Tasks*, 76 GEO. L.J. 305, 305 (1987).

b. Structure and performance in exclusion cases.—Exchanging per se liability for rule of reason analysis may be the most obvious example of antitrust’s evolution from rules to standards, but the trend has been present, if less visible, in monopolization cases too.⁵⁵ Antitrust courts have turned away from questions about firm conduct towards “structure and performance” analysis. Because monopolization looks, to the outside observer, so much like legitimate competition, courts have always struggled to separate exclusionary behavior from sharp dealing. Early landmark Sherman Act cases looked to the conduct and intent of the parties in order to determine liability.⁵⁶ Intent may be an evidentiary nightmare, but it has a per se quality: if you meant to monopolize, then you did. This syllogism seems to have motivated the decision in *United States v. Aluminum Co. of America*⁵⁷ despite statements in that case that intent is irrelevant.⁵⁸ This focus turned out to be problematic for deciding monopolization cases, not only because intent is so difficult to prove, but also because antitrust enforcement was most concerned about effects of, not motivation for, conduct. Judges began to realize the problems of using monopolistic intent as a proxy for anticompetitive effect.⁵⁹

As a result, courts began to deemphasize conduct and intent and focus on the structure of the industry in question and the performance of the defendant firm.⁶⁰ These indications of monopolistic behavior may be circumstantial, but at least they get to the regulatory intent behind the Sherman Act: to prevent anticompetitive exclusion, not to punish bad thoughts. Today, courts continue to look for market circumstances that indicate monopolization rather than looking for bad actors. For example, courts view certain practices differently depending on the defendant’s market power.⁶¹ Recognizing that context matters was a move away from rules and towards standards, and it meant that “market power”—by definition a fact-specific, case-by-case determination—would be important in (even dispositive of) allegations of exclusion. Today, a plaintiff stating a Section 2 claim must first prove as a threshold matter that the allegedly

⁵⁵ See Crane, *supra* note 44, at 65–71.

⁵⁶ See, e.g., *Standard Oil Co. v. United States*, 221 U.S. 1, 75–77 (1911).

⁵⁷ 148 F.2d 416 (2d Cir. 1945).

⁵⁸ Although Judge Hand claimed to “disregard any question of ‘intent,’” later in the same paragraph he observed that “[i]n order to fall within § 2, the monopolist must have both the power to monopolize, and the intent to monopolize.” *Id.* at 431–32.

⁵⁹ *Cf.* *United States v. Griffith*, 334 U.S. 100, 105 (1948) (“It is, however, not always necessary to find a specific intent to restrain trade or to build a monopoly in order to find that the anti-trust laws have been violated.”). For a comprehensive analysis of the role of specific and general intent in antitrust liability, see Ronald A. Cass & Keith N. Hylton, *Antitrust Intent*, 74 S. CAL. L. REV. 657 (2001).

⁶⁰ See Daniel A. Crane, *Antitrust Antifederalism*, 96 CALIF. L. REV. 1, 25–26 (2008).

⁶¹ See, e.g., Gavil, *supra* note 40, at 852 (“Market power, [defined as the power to control prices or exclude competition], has become an increasingly necessary ingredient of Section 1, non per se Sherman Act offenses.”).

monopolizing firm has a dominant market share.⁶² Likewise, some firm behaviors are perfectly legal absent market power but illegal when the firm is dominant.⁶³

Determining market power is an economically sophisticated endeavor.⁶⁴ Since *Cellophane*, courts define a relevant market as all the products that can serve as reasonable substitutes for one another.⁶⁵ In *Cellophane*, the judge determined this by ordinary common sense and a little anecdotal evidence,⁶⁶ but modern market definition necessarily involves econometrics to be upheld by a reviewing court. For example, the merger guidelines use a rigid, multistep test, known as the SSNIP test, to define the relevant market for the purpose of evaluating premerger and postmerger concentrations.⁶⁷ The SSNIP test defines a market as all the products made by the smallest set of firms, which, if merged, could execute a “small but significant non-transitory increase in price” without losing enough sales to other firms to make such a price increase unprofitable.⁶⁸ This measures the cross-elasticity of demand of a product, which essentially asks the same question asked in *Cellophane*—whether products are substitutes—but uses econometrics rather than intuition to answer it.

Despite its recipe-like structure, the SSNIP test requires expert judgment and nuance to be done properly. First, if a firm constituting the hypothetical monopolist was *already* exercising market power, the test may suggest that products are good substitutes for each other when, under competitive conditions, they are not. This was likely the case in *Cellophane* and so has come to be known as the treacherous “*Cellophane* Fallacy.” The SSNIP test does not necessarily avoid this logical error, so as a preliminary matter an economist must determine whether firms in the industry are pricing monopolistically already. Second, actually estimating a firm’s

⁶² See 1 ABA SECTION OF ANTITRUST LAW, ANTITRUST LAW DEVELOPMENTS 225–26 (6th ed. 2007).

⁶³ For example, tying (subject to Section 1 liability) is only illegal if the firm has market power in the tied product. See, e.g., *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 14 (1984), *abrogated by* *Ill. Tool Works v. Indep. Ink, Inc.*, 547 U.S. 28 (2006) (“Accordingly, we have condemned tying arrangements when the seller has some special ability—usually called ‘market power’—to force a purchaser to do something that he would not do in a competitive market.”); see also *Ill. Tool Works*, 547 U.S. at 31; 1 ABA SECTION OF ANTITRUST LAW, *supra* note 62, at 552. Even the way in which market power is defined has shifted from the realm of rules to the sea of standards. In *Illinois Tool Works*, the Court overruled their old rule that a patent was by itself sufficient proof of market power. 547 U.S. at 42–43.

⁶⁴ See Gavil, *supra* note 40, at 852–55.

⁶⁵ *United States v. E.I. du Pont de Nemours & Co. (Cellophane)*, 351 U.S. 377, 393 (1956) (“Determination of the competitive market for commodities depends on how different from one another are the offered commodities in character or use, how far buyers will go to substitute one commodity for another.”).

⁶⁶ *Id.* at 402–03.

⁶⁷ See *FTC v. Whole Foods Mkt., Inc.*, 548 F.3d 1028, 1038 (D.C. Cir. 2008).

⁶⁸ *Id.*

ability to raise its price is an exercise in hypothetical reasoning that must aggregate many variables and data on consumer reactions to price changes that can be thin and noisy. Reliably answering these questions requires sophisticated economic modeling, which, in the words of one frequent economic expert witness, is as much art as it is science.

2. *More Standards Means More Economics.*—The “reason” in the rule of reason is economic; the rule asks courts to sort business practices into those that promote competition and those that restrict it.⁶⁹ And market definition necessarily involves the expertise of an economist, since boundaries are defined according to a product’s role in the larger economy.⁷⁰ What promotes and what restricts competition, and how consumers respond to different products, are among the central inquiries of industrial organization. Far from the grist of first-year legal education, these are technical, (social) scientific questions that cannot be answered by a judge without help from expert economists.⁷¹ The operation of markets is incredibly complex because of the interrelation of all actors and the invisibility of prices, information, and incentives influencing behavior.⁷² Thus, the Supreme Court has defined the very content of a rule with reference to an area of knowledge beyond the understanding of judges. The

⁶⁹ In *Leegin*, the Supreme Court asserted that “[i]n its design and function the [rule of reason] distinguishes between restraints with anticompetitive effect that are harmful to the consumer and restraints stimulating competition that are in the consumer’s best interest.” *Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, 551 U.S. 877, 886 (2007). Judge Posner recognized this view of “reason” in an article reacting to *GTE Sylvania*: “[T]he Court is implying that antitrust prohibitions must have an economic rationale and that the aesthetic delights of smallness and the yearning to resurrect a nation of sturdy Jeffersonian yeomen will not be permitted to decide antitrust cases.” Posner, *supra* note 54, at 13. Now, three decades after the “revolution,” there is “near-universal agreement that U.S. antitrust is now essentially a set of issues in microeconomics.” Lipksy, *supra* note 4, at 164.

⁷⁰ See *Zenith Radio Corp. v. Matsushita Elec. Indus. Co.*, 505 F. Supp. 1313, 1349 (E.D. Pa. 1980) (“The role of the economist as an expert depends upon the emphasis of the various antitrust statutes, with the scope of that role widening as the focus shifts away from conduct and towards structure or performance.” (quoting Michael J. O’Hara, *The Economic Expert in the Antitrust Arena*, 12 ANTITRUST L. & ECON. REV. 17, 19 (1980)); Lawrence J. White, *Economic Analysis in Antitrust Litigation Support: The Federal Trade Commission’s 1986 Challenge to the Proposed Merger of Coca-Cola and Dr. Pepper*, in *THE ROLE OF THE ACADEMIC ECONOMIST IN LITIGATION SUPPORT*, *supra* note 24, at 11, 12 (“The rise of the structure-behavior-performance paradigm of microeconomics for analyzing markets . . . surely contributed to the rising importance of economists in antitrust litigation support.”).

⁷¹ Thomas Hungar and Ryan Koopmans put it starkly: “There is probably no other area of the law in which the Court so frequently relies on academic scholarship.” Hungar & Koopmans, *supra* note 6, at 54.

⁷² In this way, economics is similar to another social science, psychology, whose role in the courtroom is similarly up for debate. See David L. Faigman, *The Evidentiary Status of Social Science Under Daubert: Is it “Scientific,” “Technical,” or “Other” Knowledge?*, 1 PSYCHOL. PUB. POL’Y & L. 960, 963 (1995).

rule of reason and cases requiring market definition are, for all practical purposes, not judge-made but economist-made law.⁷³

By giving power over the application, and sometimes even content, of antitrust rules to economists, the shift to standards puts judges and juries at the mercy of expert witnesses.⁷⁴ Another way of saying this is that the rise of standards, like the rule of reason, represents a delegation of authority from judges and juries to economists. This raises several questions: how should judges treat expert opinions in a particular case? What kind of control should a judge exercise over the courtroom economist? Under what conditions may the judge disagree with him and reject his opinion?

B. Deference to Expert Authority in Antitrust

Judicial control over courtroom expertise presents a puzzle, since by definition an expert has knowledge not accessible to lay decisionmakers.⁷⁵ Judges and juries need help from expert economists because the economic considerations relevant to an antitrust trial are beyond their competence as laypeople.⁷⁶ Given the complexity of industrial organization economics, it is unlikely that in the course of a single trial these decisionmakers can learn enough economics—even with the help of experts—to make a fully independent judgment about the competitive effect of a business practice or the relevant definition of a market. At some point, a lay decisionmaker will have to defer to an expert’s opinion.⁷⁷ But when does expertise merit deference?

⁷³ See Stucke, *supra* note 5, at 1425–28. One symptom of this awkward arrangement is the difficulty judges have in drawing a line between expert testimony about facts (allowed by the rules of evidence) and testimony about law (technically prohibited by the rules of evidence) in rule of reason cases. See AREEDA & HOVENKAMP, *supra* note 41, ¶ 309, at 155–56 n.1. Even when an expert economist establishes “facts” about a market or a behavior’s effect on competition, these facts tend to look like conclusions of law.

⁷⁴ Gavil, *supra* note 40, at 843 (“One characteristic of this ‘new antitrust paradigm,’ however, appears to be well entrenched: it is dependent upon economics and economists.”); *Interview with Judge Vaughn Walker*, ANTITRUST, Spring 2003, at 26, 26 (“It’s impossible, it seems to me, to prosecute or to defend an antitrust case without significant expert testimony.”).

⁷⁵ Alvin I. Goldman, *Experts: Which Ones Should You Trust?*, in THE PHILOSOPHY OF EXPERTISE 14, 17–18 (Evan Selinger & Robert P. Crease eds., 2006) (defining the “novice/expert” problem).

⁷⁶ As District Court Judge Kathryn Vratil puts it, “[T]he court and the jury tend to have psychological barriers to dealing with antitrust issues. Most judges don’t encounter antitrust cases often enough to acquire a real familiarity and level of comfort From a jury’s point of view, most of them will be totally unfamiliar with economic issues.” *Interview with Judge Kathryn Vratil*, ANTITRUST, Spring 2003, at 19, 19.

⁷⁷ This statement epitomizes a “deferential” view of expert authority, which is in tension with the “educational” view of expert testimony that regards the proper role of experts as explaining their discipline to factfinders and convincing them of the truth value of their claims. A theoretical defense of the deferential view is beyond the scope of this Article, but for a more thorough discussion of the terms of the debate, see Ronald J. Allen & Joseph S. Miller, *The Common Law Theory of Experts: Deference or Education?*, 87 Nw. U. L. Rev. 1131 (1993). This article merely claims that the Supreme Court’s

The paradox of lay judgment about expertise was best articulated by Judge Learned Hand in 1901: “[H]ow can the jury judge between two statements each founded upon an experience confessedly foreign in kind to their own? It is just because they are incompetent for such a task that the expert is necessary at all.”⁷⁸ The answer, according to the Supreme Court, is to evaluate content-neutral, second-order criteria related to the opinion, and then, when these are met, to recognize the authority of its content.⁷⁹ This subpart first defines “authority” as it applies to expert witnesses and then argues that the principle rule for admitting expert testimony asks judges to treat experts as authoritative. Finally, this subpart shows that the Supreme Court treats economic consensus, not just economic opinion, as authoritative in antitrust suits.

1. Authority Defined.—Authority is content independent. We say something has authority when it requires obedience even among those who disagree with its substance. Statutes have authority not because the actors they regulate or the judges applying them believe that they are morally correct or wealth maximizing. Instead, they have force because they were enacted by the legislature, and the law demands that people obey mandates enacted by the legislature. Likewise, a judge follows Supreme Court precedent not because he agrees with the Court’s decision or its reasoning, but because he is bound to do so since it comes from the Supreme Court. “The force of an authoritative directive comes not from its content, but from its source.”⁸⁰ But even if the substance of an authoritative directive cannot be questioned, one may question whether a source ought to be considered an authority at all. In the context of legal reasoning, this inquiry involves considering the hierarchical position of the issuing court, whether the directive is still “good law,” and whether it applies to the present facts—i.e., whether it is “on point.” These questions, at least in theory, are independent of the content of the directive. A judge cannot say (at least without being accused of bucking precedent) “this case is not on point because it puts forth a bad rule.” Content-neutral criteria are “second order” criteria when they are used to evaluate an expert opinion; in contrast, “first order” analysis would directly examine the content of the opinion.⁸¹

Legal authority that is within a court’s jurisdiction is still good law, and, if on point, requires a court to follow it because a superior court *said so*. But not all authority is binding. A judge may still have content-neutral reasons for following nonbinding cases, and in this sense he recognizes

antitrust jurisprudence has made clear that at least some deference to expertise is necessary, and even encouraged, in judicial decisionmaking.

⁷⁸ Hand, *supra* note 12, at 54.

⁷⁹ *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 592–95 (1992).

⁸⁰ Frederick Schauer, *Authority and Authorities*, 94 VA. L. REV. 1931, 1935 (2008).

⁸¹ *Cf.* Vermeule, *supra* note 16 (explaining the difference between first-order reasons and second-order reasons).

their authority.⁸² For example, suppose an appellate court is presented with a legal question that has been answered by other circuits. The court may reasonably believe that it is unlikely that another circuit (or three or ten), looking at the same problem, would have gotten it substantively wrong. The appellate court's reason for following the consensus is content independent, even if it is based on a belief that the content is sound, since it does not involve a first-order analysis of the legal problem. Likewise, a judge may cite an article in *Nature* because he believes that scientific conclusions written by accomplished scientists and published in a peer-reviewed journal are unlikely to be wrong. Thus, he may reasonably assert that cells use mitochondria to generate chemical energy even without observing this phenomenon himself. This is the kind of "persuasive authority" that expert witnesses have in court. Faith in expert opinion is content neutral, but not neutral about whether its speaker has qualities that increase his likelihood of being right.⁸³

2. *The Authority of Courtroom Experts.*—In the context of economic testimony, a judge will recognize the authority of an opinion if it—and its speaker—meet certain second-order criteria set out by *Daubert* and the Federal Rules of Evidence.⁸⁴ A judge performs this content-neutral analysis in his role as evidentiary "gatekeeper," assessing the speaker's "knowledge, skill, experience, training, or education"⁸⁵ for signs that his opinion is reliable. Of the opinion itself, Federal Rule of Evidence 702 asks a judge to evaluate its basis in fact, methodology, and fit with the question being asked of the expert.⁸⁶

What constitutes sound methodology has become a complicated and contentious area of evidence law. Until 1993, expert testimony was considered reliable, and thus admissible, if "the thing from which the deduction is made [is] sufficiently established to have gained general

⁸² Schauer, *supra* note 80, at 1947–49.

⁸³ Credentials, for example, can serve as content-neutral criteria that a judge or jury can use to infer the accuracy of the speaker's testimony. See, e.g., Scott Brewer, *Scientific Expert Testimony and Intellectual Due Process*, in *THE PHILOSOPHY OF EXPERTISE*, *supra* note 75, at 111, 141.

⁸⁴ Sheila Jasanoff, *Law's Knowledge: Science for Justice in Legal Settings*, 95 AM. J. PUB. HEALTH S49, S50 (2005) ("[*Daubert*] urg[es] judges to defer to scientific authority . . ."). Adrian Vermeule argues that so, too, should nonexpert administrative decisionmakers use only second-order, or content-neutral, criteria in choosing to adopt an expert opinion. See Vermeule, *supra* note 16, at 2234–35. Vermeule endorses the second-order criterion of "nose counting"—or crediting propositions held by the majority of experts asked. *Id.* at 2234, 2250–51.

⁸⁵ FED. R. EVID. 702.

⁸⁶ *Id.* For a discussion of "fit," see *Turpin v. Merrell Dow Pharm., Inc.*, 959 F.2d 1349, 1360 (6th Cir. 1992) ("[W]e conclude that [the expert's] conclusions go far beyond the known facts that form the premise for the conclusion stated. This conclusion so overstates its predicate that we hold that it cannot legitimately form the basis for a jury verdict.").

acceptance in the particular field in which it belongs.”⁸⁷ This “general acceptance” standard, laid out in *Frye v. United States*, was revised by the Supreme Court in *Daubert v. Merrell Dow Pharmaceuticals*, which called for a more detailed inquiry into whether the methodology is “scientific.”⁸⁸ The *Daubert* test retains *Frye*’s “general acceptance” criterion, but only as one of five “general observations” about what makes testimony sufficiently scientific to be reliable and admissible.⁸⁹ The opinion suggests four other signs of scientific reliability: whether the methodology can or has been tested, whether there are established standards for the methodology, whether it is has been subjected to peer review, and whether it has a known error rate.⁹⁰

The *Daubert* criteria are, at least theoretically,⁹¹ content neutral in the sense that they focus on “principles and methodology, not on the conclusions that they generate.”⁹² A judge’s task in a *Daubert* hearing is to investigate whether an expert’s qualifications and methodology conform to scientific norms.⁹³ Of course, the line between methodology and

⁸⁷ *Frye v. United States*, 293 F. 1013, 1014 (D.C. Cir. 1923). Although *Frye* was not a Supreme Court decision, its holding was treated as the authority on expert testimony in all federal cases until *Daubert v. Merrell Dow Pharmaceuticals* overruled it in 1993. *Daubert*, 509 U.S. 579, 587, 589.

⁸⁸ *Id.* at 589–95. In 2000, the *Daubert* rule for the admissibility of expert testimony was codified in the Federal Rules of Evidence. See FED. R. EVID. 702. Many states have adopted the *Daubert* standard to govern the admissibility of expert testimony in state court. Some, however, retain the *Frye* standard. See, e.g., Edward K. Cheng & Albert H. Yoon, *Does Frye or Daubert Matter? A Study of Scientific Admissibility Standards*, 91 VA. L. REV. 471, 473 (2005).

⁸⁹ *Daubert*, 509 U.S. at 593–94.

⁹⁰ *Id.* at 593–94. The actual impact of *Daubert* on the admissibility of expert evidence is explored in Cheng & Yoon, *supra* note 88, and Lloyd Dixon & Brian Gill, *Changes in the Standards for Admitting Expert Evidence in Federal Civil Cases Since the Daubert Decision*, 8 PSYCHOL. PUB. POL’Y & L. 251 (2002). Both articles suggest that “general acceptance” still plays a dominant role in admissibility. Cheng & Yoon, *supra* note 88, at 478; Dixon & Gill, *supra*, at 278 (“[G]eneral acceptance has, if anything, increased in importance since *Daubert*.”).

⁹¹ Practically, methodology and conclusions are difficult, if not impossible, to separate. See AREEDA & HOVENKAMP, *supra* note 41, ¶ 309, at 158 (“In practice . . . these differences [between methodology and conclusions] are readily exaggerated.”). The gray area—in which a judge can reject an expert’s conclusions without appearing to second-guess the expert’s substantive opinion—is created by Rule 702’s requirement that the methodology “fit” the facts of the case. FED. R. EVID. 702(a); see also *Daubert*, 509 U.S. at 591 (discussing the “fit” requirement). For a good example of how methodology can be conflated with conclusions under a “fit” analysis, see *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 153–54 (1999).

⁹² *Daubert*, 509 U.S. at 595. As one influential *Daubert* amicus put it, “[i]t is *how* the conclusions are reached, not *what* the conclusions are, that makes them ‘good science.’” Brief Amici Curiae of Nicolaas Bloembergen et al. in Support of Respondents at 22, *Daubert*, 509 U.S. 579 (No. 92-102), 1993 WL 13006286, at *22.

⁹³ *Daubert* asks the judge to act “as an external observer comparing the expert’s methodologies with what appears to be acceptable.” 5 DAVID L. FAIGMAN ET AL., MODERN SCIENTIFIC EVIDENCE: THE LAW AND SCIENCE OF EXPERT TESTIMONY § 44:9, at 708 (2008). For a discussion of this task in an antitrust trial, see AREEDA & HOVENKAMP, *supra* note 41, ¶ 309, at 158.

conclusions can be elusive,⁹⁴ but *Daubert* at least rhetorically recognizes a difference. In doing so, it carves out part of the expert's opinion as off-limits to a second-guessing judge.⁹⁵

Similarly, juries assess second-order criteria when choosing to credit an expert's testimony once it is admitted. At least the jury makes some indirect judgments about reliability, as we may infer from the common practice of questioning an expert witness in front of the jury about his credentials, experience, and education.⁹⁶ And of course a jury can consider the demeanors of all witnesses—including experts—in choosing to credit their testimony.⁹⁷ How the judge and jury should divide the task of evaluating an opinion's reliability is the subject of a raging debate.⁹⁸ But for

⁹⁴ See *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997) (“But conclusions and methodology are not entirely distinct from one another.”); Roger D. Blair & Jill Boylston Herndon, *The Implications of Daubert for Economic Evidence in Antitrust Cases*, 57 WASH. & LEE L. REV. 801, 815–16 (2000) (“In many cases, it will be difficult, if not impossible, to disentangle the methodology from the conclusions because the conclusions are often dependent on the methodology employed.”).

⁹⁵ Edward Imwinkelried's influential “syllogistic” model of expert evidence implicitly recognizes the authority—the unassailability—of (at least part of) an expert's testimony. Edward J. Imwinkelried, *The “Bases” of Expert Testimony: The Syllogistic Structure of Scientific Testimony*, 67 N.C. L. REV. 1, 9–10 (1988). Imwinkelried persuasively argues that an expert's testimony properly takes the shape of a syllogism, where the major premise consists of scientific propositions proven by generations of scientists and accepted by consensus of the academic community. *Id.* The minor premise consists of the facts of the case at hand, and the conclusion results from the expert's application of the major premise to the minor premise. *Id.* Imwinkelried advocates for very different standards of deference for an expert's major and minor premises, implicitly recognizing that judicial second-guessing about a major premise voids the benefit of the expert in the first place. *Id.*

[T]he witness' choice of theories and studies to employ as a major premise should be afforded substantial deference. The scientific witness is an expert precisely because he has intensively studied the literature in that field. That study may be the witness' life work. The witness' sphere of expertise consists of mastery of the concepts, methodologies, principles, and theories peculiar to the witness' scientific discipline. The scientific witness knows “the ways of his work” better than the judge or jurors. In selecting a major premise, the witness acts in his capacity as a[n] expert. Because the scientific witness has unique, superior expertise in the field, the witness' choice of a major premise warrants great respect.

When we turn to the witness' selection of information as a minor premise, a radically different picture emerges. . . . [T]here is a much less compelling case for deference to the witness' selection.

Id. (citations omitted).

⁹⁶ These indirect judgments may also be inferred from jury instructions emphasizing that “[i]f you should decide that the opinion of an expert witness is not based upon sufficient education or experience . . . you may disregard the opinion in part or in its entirety.” Neil Vidmar & Shari Seidman Diamond, *Juries and Expert Evidence*, 66 BROOK. L. REV. 1121, 1130 (2001) (quoting EDWARD J. DEVITT ET AL., 1 FEDERAL JURY PRACTICE AND INSTRUCTIONS § 14.01, at 404 (4th ed. 1992) (civil and criminal)).

⁹⁷ The federal pattern instructions admonish the jury to consider all witnesses' “intelligence, motive and state of mind, and demeanor and manner while on the stand,” *id.* at 1128 (quoting 3A DEVITT ET AL., *supra* note 96, § 73:01, at 49 (4th ed. 1987) (civil)), and then emphasizes that they “should consider the testimony of expert witnesses just as you consider other evidence in this case.” *Id.* at 1130 (quoting DEVITT ET AL., *supra*, § 14.01, at 404). Perhaps in some circumstances the layperson can also evaluate the internal coherence of an expert's argument. See Brewer, *supra* note 83, at 136–41.

⁹⁸ On the one side are those more comfortable with judges making reliability determinations. These are the commentators who say judges improperly punt it to the jury. See, e.g., Blair & Herndon, *supra*

both judge and jury, the heart of the expert opinion—to use Schauer’s terms, its *content*, and to use *Daubert*’s terms, its *conclusions*—is unassailable.

3. *The Authority of Economic Consensus.*—If there were just one scientifically reasonable truth about an economic question and *Daubert*’s second-order criteria worked well to weed out unreliable economics, then there would be no battle-of-the-experts problem in antitrust trials. Whether *Daubert* works well for economics is a question for another day, but even if it did, the first proposition is obviously false. So the problem of dueling antitrust experts endures. Scientific opinion, at least about matters complex enough to be relevant in an antitrust trial, is never perfectly heterogeneous. What should a judge do when faced with two conflicting, yet unassailable scientific conclusions?

If the overall distribution of expert opinion on the matter heavily favors one side, that can be a good indication—its content neutral—that the favored side is right. This notion of consensus is, according to modern philosophy of science, the very essence of scientific proof.⁹⁹ Put simply, “[s]cience converges.”¹⁰⁰ The truth value of consensus may play a particularly important role in nonexperimental sciences like economics, where without what Milton Friedman calls the “essential experiment,” the “weeding-out of unsuccessful hypotheses [is] slow and difficult. They are seldom downed for good and are always cropping up again.”¹⁰¹ Unsurprisingly, reviewing courts often cite “academic consensus” as support for an antitrust judgment or rule.¹⁰²

For example, in *Leegin*, the Court justified its decision eliminating the per se ban on resale price maintenance by citing expert economic consensus as support for the theoretical proposition that the practice can be used to promote competition.¹⁰³ The Court explained that “[t]hrough each side of the debate can find sources to support its position, it suffices to say here that economics literature is replete with procompetitive justifications for a manufacturer’s use of resale price maintenance.”¹⁰⁴ It went on to describe

note 94, at 813–14. On the other side are those who prefer jury decisionmaking about expert reliability. These are the commentators who say judges improperly usurp the domain of the jury. *Cf. In re High Pressure Laminates Antitrust Litig.*, No. 00 MDL 1368(CLB), 2006 WL 931692 (S.D.N.Y. Apr. 7, 2006).

⁹⁹ See Huber, *supra* note 14, at 739–42 (describing the role of consensus in science).

¹⁰⁰ *Id.* at 724.

¹⁰¹ MILTON FREIDMAN, *The Methodology of Positive Economics*, in *ESSAYS IN POSITIVE ECONOMICS* 3, 11 (1953).

¹⁰² See *supra* note 6.

¹⁰³ *Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, 551 U.S. 877, 889 (2007).

¹⁰⁴ *Id.*

that proposition as “essentially undisputed,”¹⁰⁵ representing “widespread consensus,”¹⁰⁶ and having the support of the “bulk of the economic literature.”¹⁰⁷

Tellingly, the thrust of the dissent was that there was not expert consensus on a related point: whether and to what extent the theoretically procompetitive uses of RPM actually happen.¹⁰⁸ The real-world existence of a theoretical benefit is an empirical question, but like most empirical economic questions, it is not likely to be answered through experimentation. An economist’s best guess will be based on data about the uses of RPM and its effect on price and quantity from the actual wholesale-to-retail market. The four-Justice dissent attacked the lack of consensus on this question:

How often . . . will the benefits to which the Court points occur in practice? I can find no economic consensus on this point. There is a consensus in the literature that “free riding” takes place. But . . . [t]he question is how often the “free riding” problem is serious enough significantly to deter dealer investment.¹⁰⁹

Still, both the majority and the dissent thought consensus was important in evaluating the theoretical and empirical claims of each side’s experts.¹¹⁰

III. THE DUBIOUS AUTHORITY OF ECONOMIC EXPERTS IN ANTITRUST TRIALS

So the stage is set for a conflict—one that plays out in many areas of law but especially those, like antitrust, that rely heavily on technical and specialized knowledge. The Supreme Court asks lower courts to make and apply antitrust rules by deferring to academic consensus, but gives them a procedure—adversarial expertise—that systematically conceals consensus. If the Supreme Court’s delegation of rulemaking authority to courtroom economists in *Daubert* worked smoothly, then a judge’s job would simply be to qualify experts using its content-neutral criteria and then defer to their opinions. But in qualifying antitrust experts, second-order signs of reliability fail the antitrust judge. *Daubert*, whatever its value in weeding out bad methodology, cannot eliminate legitimate, methodologically sound

¹⁰⁵ *Id.* (quoting Brief of Amici Curiae Economists in Support of Petitioner at 16, *Leegin*, 551 U.S. 877 (No. 06-480)).

¹⁰⁶ *Id.* (quoting Brief for the United States as Amici Curiae Supporting Petitioner at 9, *Leegin*, 551 U.S. 877 (No. 06-480)).

¹⁰⁷ *Id.* (quoting ABA SECTION OF ANTITRUST LAW, ANTITRUST LAW AND ECONOMICS OF PRODUCT DISTRIBUTION 76 (2006)).

¹⁰⁸ *Id.* at 915 (Breyer, J. dissenting).

¹⁰⁹ *Id.*

¹¹⁰ For another example of the Court’s respect for consensus positions when faced with disagreement, see *State Oil Co. v. Khan*, 522 U.S. 3, 15–18 (1997) (rejecting economic justifications for a per se rule because “criticism of those premises abounds”).

differences of opinion among experts. And consensus, the second-order criterion that reviewing courts often find dispositive, is obscured by the adversarial method of expert evidence. Judges are left with no choice but to engage the substance of experts' economic claims—the conclusions *Daubert* tried to leave unassailable—in deciding antitrust cases.

This Part outlines the judge's three possible moves in response to (apparent) deadlock among qualified economists in an antitrust trial. First, judges may engage in first-order analysis of economic opinion by distorting the *Daubert* standard. For example, judges sometimes require that an expert's opinion *in that case* has been actually verified by the economic community, rather than requiring her to use a methodology that is, in the abstract, susceptible to verification. Or judges use *Daubert* to criticize the way an expert *uses* an accepted methodology, which can be tantamount to questioning her conclusion.

Second, a judge can distort the summary judgment standard to reject a claim that is supported by an economic argument he finds substantively wrong. Here, judges are actually spurred on by Supreme Court precedent condoning, or even perhaps requiring, antitrust courts to engage in substantive analysis of expert opinion when granting summary judgment. Judges make similar first-order assessments at other stages of a trial that call for a summary evaluation of the merits, such as class certification or considering a temporary injunction pending final resolution of the case.

Finally, a judge can punt the issue to a jury, which is likely to be even less qualified than a judge to engage in antitrust economics. Juries are forced to look for other, less relevant criteria, or to decide the case as a matter of substantive economics. Thus, the jury is asked to mediate an academic debate that is, by definition, beyond its competence. All three moves require laypeople to resolve academic disagreements and do economic science in the first instance, potentially resulting in an almost arbitrary choice between a majority and minority view on the economic issue in question.

A. *Distortions of Daubert*

When faced with the dilemma of two qualified but contradictory expert opinions, judges often try to avoid arbitrary judgments by resolving the economic controversy before any evidence gets to a jury.¹¹¹ But since

¹¹¹ Richard Katskee argues that judges do this for a legitimate and laudable reason: to preserve the legitimacy of court decisions. Richard B. Katskee, *Science, Intersubjective Validity, and Judicial Legitimacy*, 73 BROOK. L. REV. 857, 862 (2008). Under his argument, pure deference to economists would place the substantive reasoning behind a legal decision outside the comprehension of the public, as would “black box” jury decisions. By engaging in economic science in a legal opinion, a judge makes the determinants of a decision visible. *Id.* “If courts are to provide what most of us will regard as a fair trial . . . they must base their rulings on publicly accessible facts, which they must then weigh, measure, and test using publicly accessible forms of legal reasoning.” *Id.*

Daubert is designed to prevent first-order analyses of expert opinions, judges must bend the standard to do so.¹¹² The first way in which a judge can distort the *Daubert* standard is to apply its criteria directly to the facts being offered by the expert in the case.¹¹³ *Daubert* requires that an expert's methodology be scientific, which can be evinced by its being subject to validation and peer review, having a known error rate, and being accepted by the "relevant scientific community."¹¹⁴ But sometimes a court will take this a step further and require that the actual opinion offered in the present case be subject to these requirements.¹¹⁵ Data and conclusions prepared for litigation are unlikely to be published and so in most cases will not have been subjected to peer review or replicated and verified by other economists.¹¹⁶

This reformation of *Daubert* is most clearly illustrated in *City of Tuscaloosa v. Harcros Chemicals, Inc.*, a case alleging that chlorine wholesalers in Alabama fixed prices in violation of the Sherman Act.¹¹⁷ The plaintiff's expert offered "an economic analysis of market structure and competitive behavior"¹¹⁸ that concluded that "[t]he liquid chlorine industry, notably the activities of repackagers/distributors fits the[] market conditions and product characteristics . . . [most conducive to] collusive activities."¹¹⁹ The district court found his testimony to be inadmissible because "[a]s subjective beliefs, his interpretive opinions have not and cannot be tested, have not been subjected to peer publication, cannot have a known or potential rate of error, do not have general acceptance in economics, and

¹¹² One reason why courts may choose to do substantive economics during a *Daubert* hearing rather than as a matter of law at summary judgment is that decisions to exclude or admit testimony are reviewed for abuse of discretion. *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 141–42 (1997). This largely insulates a district judge's economic reasoning from reversal, but it also means that courts of appeals cannot develop "a consistent body of criteria of reliability that should be used for particular types of recurring expert testimony." Gavil, *supra* note 40, at 851.

¹¹³ See Gavil, *supra* note 8, at 677–78.

¹¹⁴ *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 594–95 (1993).

¹¹⁵ See, e.g., *City of Tuscaloosa v. Harcros Chems., Inc.*, 877 F. Supp. 1504 (N.D. Ala. 1995), *aff'd in part, vacated in part, rev'd in part*, 158 F.3d 548 (11th Cir. 1998).

¹¹⁶ Experts often do transform work done for trials into academic pieces, but this is typically done after the conclusion of a controversy. Economics professor William Baumol says serving as an expert witness "has contributed materially to [his] academic output," and cites that as one of the best reasons (above remuneration!) for an academic economist to act as a consultant or a witness in litigation. William J. Baumol, *Research, Pure and Impure: Their Economies of Scope*, in *THE ROLE OF THE ACADEMIC ECONOMIST IN LITIGATION SUPPORT*, *supra* note 24, at 31, 31. Sheila Jasanoff identifies a more troubling instance of courtroom experts publishing related articles: "The *Nature* article on DNA typing by Eric Lander and Bruce Budowle was interpreted by some as an attempt to create the appearance of consensus and thus to provide easier entry for DNA testimony in the O.J. Simpson murder trial." JASANOFF, *supra* note 18, at 52.

¹¹⁷ *Tuscaloosa*, 877 F. Supp. at 1509.

¹¹⁸ *Id.* at 1513.

¹¹⁹ *Id.* (quoting expert report of Robert F. Lanzillotti).

have not been generally accepted.”¹²⁰ The judge concluded: “Therefore, they are not reliable under *Daubert*.”¹²¹ By using the strictures of *Daubert* but applying them to the expert’s data and opinion, not to his methodology, the *Tuscaloosa* court disguised substantive reasons for disagreement as content neutral.

The second kind of *Daubert* twist occurs when a judge excludes an expert’s testimony based not on faulty methodology, but rather on faulty *use* of a legitimate methodology. Objecting to the way a methodology is used can be very similar to objecting to a methodology, close enough that the Court has endorsed the use of *Daubert* to conclude that there is “simply too great an analytical gap between the data and the opinion proffered.”¹²² But often this kind of analysis is actually substantive disagreement dressed up as a methodological critique. *Concord Boat Corp. v. Brunswick Corp.*¹²³ provides a good example. In that case, an expert whose qualifications were unimpeached claimed to be using a Cournot¹²⁴ model to show that a defendant’s market share was evidence of monopolistic behavior.¹²⁵ He improperly assumed that two firms engaged in Cournot competition would share the market 50/50. According to the expert, if the defendant achieved a market share greater than 50%, then it must have engaged in anticompetitive conduct.¹²⁶

It should not surprise even someone without economic training that this assumption of 50/50 market share in a competitive Cournot duopoly is overly simplistic.¹²⁷ But the economist’s methodology—analyzing oligopolistic markets by using a Cournot model assuming rational, profit-maximizing, quantity-setting oligopolists—was sound.¹²⁸ The district court admitted the evidence after a *Daubert* challenge,¹²⁹ but the Eighth Circuit reversed in an opinion that conflated second-order analysis of methodology with first-order use of that methodology.¹³⁰ Its opinion reads more like a discussion of the sufficiency of the evidence rather than its admissibility,

¹²⁰ *Id.* at 1526.

¹²¹ *Id.*

¹²² *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997).

¹²³ 207 F.3d 1039 (8th Cir. 2000).

¹²⁴ Cournot competition describes rivals who compete by setting quantity. Each firm’s chosen output will maximize its profit when it is its “best response” to its rival’s output, keeping in mind that its rival will also produce its “best response.” Thus, under the Cournot model, firms’ outputs can be described as a Nash Equilibrium. Andrew F. Daughety, *Cournot Competition*, in 1 THE NEW PALGRAVE DICTIONARY OF ECONOMICS 301, 301 (Steven N. Durlauf & Lawrence E. Blume eds., 2d ed. 2008).

¹²⁵ *Concord Boat*, 207 F.3d at 1056.

¹²⁶ *Id.*

¹²⁷ See AREEDA & HOVENKAMP, *supra* note 41, ¶ 309, at 179.

¹²⁸ Solow & Fletcher, *supra* note 18, at 501.

¹²⁹ *Concord Boat*, 207 F.3d at 1057.

¹³⁰ *Id.*

impugning the “legally sufficient evidentiary basis,”¹³¹ the “probative value”¹³² of expert opinion evidence, and the evidence’s ability to “sustain a jury’s verdict.”¹³³

Similarly, in *In re Aluminum Phosphide Antitrust Litigation*, a district judge comprehensively deconstructed an expert’s regression analysis of price data.¹³⁴ Finding the model lacking because it failed to consider variables she felt were relevant, she excluded it under *Daubert*.¹³⁵ She attacked his assumptions as “unjustified” and his conclusions as “scientifically unsound and irrelevant under *Daubert*.”¹³⁶ Her in-depth, and quite competent, evaluation of the expert’s testimony revealed significant flaws in the model, but required her to adopt the role of a peer reviewer of an economist’s argument. She stepped outside her limited role as a gatekeeper and evaluated the substance and conclusions of the expert testimony. In contrast, a different district court judge facing the same scenario—experts with dueling regression analyses of price data—admitted both with only a sentence or two about *Daubert*.¹³⁷ In his view, “[e]conometric and regression analyses are generally considered reliable disciplines. . . . [R]egression analysis is testable, generally accepted and reproducible.”¹³⁸ In both *Concord Boat* and *Aluminum Phosphide*, the district judges assumed the role of economist, and, probably as a matter of economics, got to the right answer—or at least excluded the wrong answer. But in both cases the judges had to bend *Daubert*’s vision of deference to (qualified) experts’ substantive claims.

B. *Matsushita Encourages Judicial Second-Guessing of Economic Experts at Summary Judgment*

Likewise, in evaluating the sufficiency of the evidence on a motion for summary judgment, a strict interpretation of procedural rules would imply that a judge ought not to engage in first-order economic analysis. On a motion for summary judgment, expert testimony is theoretically like any other factual testimony. To the extent that expert opinions raise a “genuine issue of material fact,” the conflict is resolved in favor of the nonmoving party.¹³⁹ In other words, if experts on each side disagree about a material point, the judge, having qualified the expert under *Daubert*, must assume

¹³¹ *Id.* (quoting *Weisgram v. Marley Co.*, 528 U.S. 440, 447 n.4, 454 (2000)).

¹³² *Id.* (citing *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 594 n.19 (1986)).

¹³³ *Id.* at 1057.

¹³⁴ 893 F. Supp. 1497, 1500–05 (D. Kan. 1995).

¹³⁵ *Id.* at 1507.

¹³⁶ *Id.*

¹³⁷ *Ohio ex rel. Montgomery v. Louis Trauth Dairy, Inc.*, 925 F. Supp. 1247, 1252 (S.D. Ohio 1996).

¹³⁸ *Id.*

¹³⁹ *Eastman Kodak Co. v. Image Technical Servs., Inc.*, 504 U.S. 451, 456 (1992).

the nonmoving party's expert opinion is methodologically sound, and then evaluate the sufficiency of the evidence as a matter of law. According to a strict interpretation of the summary judgment standard, to disbelieve an expert for substantive reasons invades the province of the jury, who is charged with resolving all issues of credibility.¹⁴⁰

But in antitrust cases, the Court has developed a more liberal standard for granting summary judgment, exemplified in its *Matsushita Electric Industrial Co. v. Zenith Radio Corp.*¹⁴¹ decision in 1986.¹⁴² A plaintiff whose claim “simply makes no economic sense” must “come forward with more persuasive evidence to support [his] claim than would otherwise be necessary” to survive summary judgment.¹⁴³ “Economic sense,” of course, is not a legal concept, but an economic one developed through expert testimony. Effectively, *Matsushita* requires judges to weigh the credibility of conflicting expert testimony—already ruled admissible at the *Daubert* stage—as a prelude to finding the evidence sufficient for summary judgment.¹⁴⁴

Matsushita alleged an implausible conspiracy—decades long and involving several companies—to sell Japanese televisions in the United States at predatorily low prices in an effort to drive American manufacturers out of the market.¹⁴⁵ The plaintiffs' experts presented evidence that the Court characterized as merely “consistent” with an inference of exclusion through predatory pricing.¹⁴⁶ The Third Circuit ruled that the district court should not have excluded the expert testimony because once the expert was qualified, he was entitled to rely on whatever he wanted (respecting the content neutrality of authority).¹⁴⁷ But the Supreme Court reversed. According to the Court, predatory pricing in the context of international television sales was implausible as a matter of economic theory, and so evidence more than just “consistent” with

¹⁴⁰ Cf. Gavil, *supra* note 8, at 699 (distinguishing the kind of credibility evaluation that is within the province of the judge—that derived from “qualification, relevance, and reliability”—and the kind of credibility solely within the province of the jury—that related to the “ultimate burden of persuasion”).

¹⁴¹ 475 U.S. 574 (1986).

¹⁴² AREEDA & HOVENKAMP, *supra* note 41, ¶ 309, at 189.

¹⁴³ *Matsushita*, 475 U.S. at 587.

¹⁴⁴ See AREEDA & HOVENKAMP, *supra* note 41, ¶ 309, at 189–90 (“One important but perhaps unforeseen consequence of *Matsushita* is that it may require the federal judge to engage the economist on the latter's own terms. . . . *Matsushita* often forces the antitrust judge to get into the expert's discipline itself and to reject the expert's own substantive conclusions in favor of the judge's own.”).

¹⁴⁵ *Matsushita*, 475 U.S. at 577–78.

¹⁴⁶ *Id.* at 580–81. Specifically, the plaintiffs claimed that the Japanese market producing consumer electronics was oligopolistic, that they faced “higher fixed costs than their American counterparts,” that they had capacity in excess of the Japanese demand for their products, that the Japanese manufacturers fixed minimum export prices by agreement, that they limited their American distributors also by agreement, and that these minimum export prices were consistently undercut by complicated rebate schemes. *Id.*

¹⁴⁷ *In re Japanese Elec. Prods. Antitrust Litig.*, 723 F.2d 238, 277–78 (3d Cir. 1983).

exclusionary intent was required to survive summary judgment.¹⁴⁸ Economic theory suggested that the underpricing was more likely the Japanese competing with the Americans than the implementation of “an economically senseless conspiracy” to predate their rivals.¹⁴⁹ So the Americans had to show evidence that was not only consistent with illegal behavior, but “tend[ed] to exclude the possibility” of innocuous behavior.¹⁵⁰ A motive on the part of the Japanese, in particular, was lacking, so summary judgment was required.¹⁵¹

Subsequent lower court opinions confirm that *Matsushita* created a kind of exception to the traditional rule that judges may not independently weigh factual evidence in deciding a motion for summary judgment. In *Rebel Oil Co. v. Atlantic Richfield Co.*, for example, the Ninth Circuit characterized *Matsushita* and its progeny as holding that “[i]n the context of antitrust law, if there are undisputed facts about the structure of the market that render the inference economically unreasonable, the expert opinion is insufficient to support a jury verdict.”¹⁵² In other words, if a judge believes that a fully qualified economic expert is being “economically unreasonable,” his testimony can be disregarded.

Rebel Oil hinged on whether the retail gasoline market included both self- and full-service products.¹⁵³ The district court denied the defendants’ motion for summary judgment because experts on both sides disagreed about the appropriate market boundaries, but the Ninth Circuit reversed after an “independent review of Rebel’s expert affidavits” that “compel[ed] the conclusion that it would be unreasonable for a juror to infer from those affidavits that full-serve sales of gasoline should be excluded from the relevant market.”¹⁵⁴ The expert on the side of the nonmoving party was simply wrong as a matter of economics,¹⁵⁵ and so, as a matter of law, the evidence was insufficient to support a jury verdict.¹⁵⁶ Thus, the court second-guessed the substance of qualified expert testimony, turning summary judgment into a mini-trial in which a trier of fact weighs the persuasiveness of competing testimony.¹⁵⁷

¹⁴⁸ *Matsushita*, 475 U.S. at 588 (“[C]onduct as consistent with permissible competition as with illegal conspiracy does not, standing alone, support an inference of antitrust conspiracy.” (citing *Monsanto Co. v. Spray-Rite Serv. Corp.*, 465 U.S. 752, 754 (1984))).

¹⁴⁹ *Id.* at 597–98.

¹⁵⁰ *Id.* at 588 (quoting *Monsanto*, 465 U.S. at 764).

¹⁵¹ *Id.* at 596–97.

¹⁵² 51 F.3d 1421, 1435–36 (9th Cir. 1995) (citing *Eastman Kodak Co. v. Image Technical Servs., Inc.*, 504 U.S. 451, 468–69 (1992)).

¹⁵³ *Id.* at 1434–35.

¹⁵⁴ *Id.* at 1436.

¹⁵⁵ *Id.*

¹⁵⁶ *Id.* at 1443.

¹⁵⁷ *Cf. Elliott*, *supra* note 1, at 499 (“Summary judgment is not a very useful tool for probing conflicting scientific judgments . . .”).

There may be similar pressure to decide economics as a matter of law at other stages of litigation that require a summary evaluation of the merits. For example, the First Circuit recently reversed a class certification order because the trial judge had not adequately developed and evaluated the economic realities behind the antitrust claim.¹⁵⁸ It disapprovingly noted the lower court's willingness to delay critical evaluation of the economics of the case.¹⁵⁹ The First Circuit conceded that "[i]t is true that the validity of plaintiffs' theory is a common disputed issue. It will be for the fact finder to decide whether this theory is persuasive."¹⁶⁰ But it demanded from plaintiffs a stronger economic theory before the class could be certified. "We are looking here not for hard factual proof, but for a more thorough explanation of *how* the pivotal evidence behind plaintiff's theory can be established."¹⁶¹ Similar pressure to evaluate a case's economic merits may exist at the preliminary injunction stage.¹⁶²

C. *Weyerhaeuser and the Perils of Leaving Economic Judgment to a Jury*

The third move courts make in response to obscured economic consensus in antitrust cases is to ask a jury to decide between two opposing experts or use the jurors to triangulate a consensus position. For example, in 2003, Judge Panner of the District of Oregon presided over an antitrust trial against Weyerhaeuser, a sawmill that made finished lumber from alder logs, which it purchased from local timberland owners and loggers.¹⁶³ A competitor, Ross-Simmons, sued Weyerhaeuser, alleging monopolization under Section 2 of the Sherman Act, accusing the company of deliberately bidding up the price of the input logs in an attempt to drive Ross-Simmons out of business.¹⁶⁴ The economic theory of the plaintiff's case was that as a dominant purchaser of alder logs, Weyerhaeuser had market power to affect the price of logs, which it did in order to put Ross-Simmons out of business.¹⁶⁵

Dr. Richard Zerbe testified as an expert for Ross-Simmons, describing Weyerhaeuser's conduct as a kind of buyer-side predation. In his affidavit, he explained that "raising rivals' costs through purchases or other

¹⁵⁸ *In re New Motor Vehicles Canadian Exp. Antitrust Litig.*, 522 F.3d 6, 29 (1st Cir. 2008).

¹⁵⁹ *Id.* at 19 ("The court noted it did not yet have enough evidence to determine the merits question of whether the plaintiff classes actually suffered antitrust or consumer protection injury. It repeatedly emphasized it would address that question later on a proper record—for example, at summary judgment.").

¹⁶⁰ *Id.* at 29 (citation omitted).

¹⁶¹ *Id.*

¹⁶² *See, e.g.*, *FTC v. Whole Foods Mkt., Inc.*, 548 F.3d 1028 (D.C. Cir. 2008).

¹⁶³ *Confederated Tribes of Siletz Indians of Or. v. Weyerhaeuser Co.*, 411 F.3d 1030, 1034 (9th Cir. 2005).

¹⁶⁴ *Id.* at 1034–35.

¹⁶⁵ *Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co.*, 549 U.S. 312, 316 (2007).

restrictions on necessary inputs (known as real foreclosure) is a recognized method of gaining market power.”¹⁶⁶ After Ross–Simmons’s exit, Weyerhaeuser would enjoy either increased monopsony power as a purchaser of alder logs or monopoly power as a seller of lumber, or both.¹⁶⁷ He argued explicitly that economic harm from overbuying would result from wasted resources since, as a predatory bidder, Weyerhaeuser purchased more logs than it could process into lumber.¹⁶⁸ He argued implicitly that consumer harm resulted from the foreclosure of competition in the downstream market.

Weyerhaeuser rebutted Dr. Zerbe’s testimony with its own economic expert, Dr. Randall Pozdena. Dr. Pozdena pointed out that the “raising rivals’ costs” idea had “failed to achieve widespread acceptance by the economics community.”¹⁶⁹ He explained that the theory was imprecise because it required recognizing when a purchaser buys an input “significantly in excess” of what is “reasonably needed,” terms that could not be defined without making a substantive judgment about how a company ought to be conducting its business of production.¹⁷⁰ Taken in the best light possible, Dr. Pozdena argued, the plaintiffs’ theory of foreclosure was actually an allegation of predation, and as such required evidence that Weyerhaeuser had been losing money on their “overbuying” of alder logs.¹⁷¹ Dr. Pozdena argued that Dr. Zerbe’s testimony was deficient because it did not show that Weyerhaeuser’s conduct had the hallmark of predatory behavior: negative profits.¹⁷² Thus Dr. Pozdena implied that buyer-side predation is analytically analogous to seller-side predation, a view that Dr. Zerbe did not share.

¹⁶⁶ Plaintiffs’ Expert Witness Statement of Richard O. Zerbe, Jr. at 4, *Confederated Tribes of Siletz Indians of Or. v. Weyerhaeuser Co.*, No. 3:00-cv-01693-PA, 2003 WL 23715982 (D. Or. Oct. 27, 2003), 2003 WL 24868040.

¹⁶⁷ *Id.* at 5 (“Weyerhaeuser executives advocate consolidation in the industry as part of an effort to gain greater control over product price and in turn profitability.”); Transcript of Jury Trial Proceedings at 56, *Confederated Tribes*, 2003 WL 23715982, 2003 WL 24267869; *see also* ANDREW I. GAVIL ET AL., *ANTITRUST LAW IN PERSPECTIVE: CASES, CONCEPTS AND PROBLEMS IN COMPETITION POLICY* 673–74 (2d ed. 2008).

¹⁶⁸ Plaintiffs’ Expert Witness Statement of Richard O. Zerbe, Jr., *supra* note 166, at 4–5 (“Specifically, Weyerhaeuser purchased alder sawlogs in quantities that exceeded not only what would have purchased [sic] in the absence of predatory behavior, but even in excess of what could be processed prior to degradation of the sawlogs.”).

¹⁶⁹ Expert Report of Dr. Randall J. Pozdena at 26, *Confederated Tribes*, 2003 WL 23715982, 2003 WL 33782319. He also described “raising rivals’ costs” as “a controversial and little-accepted form of predatory behavior,” *id.* at 7 (emphasis omitted), and an “arcane notion.” Third Supplemental Declaration of Dr. Randall J. Pozdena at 9, *Confederated Tribes*, 2003 WL 23715982, 2003 WL 24243963.

¹⁷⁰ Expert Report of Dr. Randall J. Pozdena, *supra* note 169, at 26.

¹⁷¹ Transcript of Jury Trial Proceedings at 69–71, *Confederated Tribes*, 2003 WL 23715982, 2003 WL 24243961 (“[T]he best measure of whether you’re hurting yourself or not in this particular industry is: Are you making money on the logs that you buy?”).

¹⁷² Expert Report of Dr. Randall J. Pozdena, *supra* note 169, at 22.

Both economists were well qualified and had published in the area of competitive foreclosure. Dr. Zerbe had a Ph.D. from Duke in economics and held a dual appointment as a professor at University of Washington's School of Law and School of Public Affairs.¹⁷³ He had published dozens of articles in antitrust and law and economics, including a seminal piece on predatory pricing¹⁷⁴ that had been cited by the First Circuit in *Barry Wright Corp. v. ITT Grinnell Corp.*¹⁷⁵ and by over twenty-five law review articles. Dr. Pozdena also had a Ph.D. in economics and had teaching experience at UC Berkeley's and UC Irvine's business schools. He was the managing director of a global economic consulting firm and, like Dr. Zerbe, he had published extensively in the field of antitrust economics.¹⁷⁶

Although Judge Panner did not write an opinion about the dueling expert evidence, he had two opportunities to decide the answer for himself based on his own best guess about market foreclosure and predatory conduct: at *Daubert* hearings and at summary judgment. He chose a third option and allowed both opinions to go before the jury. The jury returned a \$26 million verdict on Dr. Zerbe's theory that predatory bidding is analytically distinct from predatory buying.¹⁷⁷ Taking up the idea that predatory pricing affects consumers differently from predatory buying, the Ninth Circuit affirmed.¹⁷⁸

But the Supreme Court reversed, seemingly moved by the idea that the weight of economic authority sided with Dr. Pozdena.¹⁷⁹ Big names in antitrust economics like William Baumol, Kenneth Elzinga, and George Hay filed an amicus brief with the Supreme Court outlining the dominant position of industrial organizational economists—that predatory bidding and predatory pricing are analytically identical.¹⁸⁰ They argued that both are rarely successful, and failed attempts actually benefit consumers in the form of lower prices of the finished good.¹⁸¹ This argument proved dispositive to the Supreme Court.¹⁸² The jury, it seemed, was not able to discover the consensus position any more than Judge Panner was.

¹⁷³ Resume of Richard O. Zerbe, Jr., *Confederate Tribes*, 2003 WL 23715982, 2000 WL 35768885.

¹⁷⁴ Richard O. Zerbe, Jr. & Donald S. Cooper, *An Empirical and Theoretical Comparison of Alternative Predation Rules*, 61 TEX. L. REV. 655 (1982).

¹⁷⁵ 724 F.2d 227, 232 (1st Cir. 1983).

¹⁷⁶ Expert Report of Dr. Randall J. Pozdena, *supra* note 169, at 1–2.

¹⁷⁷ That calculation was trebled under Clayton Act § 4, hitting Weyerhaeuser with an almost \$80 million judgment. *Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co.*, 549 U.S. 312, 317 (2007).

¹⁷⁸ *Confederated Tribes of Siletz Indians v. Weyerhaeuser Co.*, 411 F.3d 1030, 1034 (9th Cir. 2005).

¹⁷⁹ *Ross-Simmons*, 549 U.S. 312, 321–25.

¹⁸⁰ Brief of Economists as Amici Curiae in Support of Petitioner at 11–13, *Ross-Simmons*, 549 U.S. 312, 2006 WL 2459522.

¹⁸¹ *Id.* at 3–8.

¹⁸² *Ross-Simmons*, 549 U.S. at 323–25.

The problems with jury decisionmaking in technical areas have been well documented, especially in the antitrust context. Judge Frank Easterbrook articulated the costs of unreasoned, and thus unpredictable, jury verdicts: “To set the jury adrift on uncharted seas—and then to defer to whatever it does—is to introduce considerable risk into all business decisions.”¹⁸³ Whether this state of affairs is worse than when a judge treats his own economic conclusions as dispositive is another matter.¹⁸⁴ But in either scenario, the economic debate—thought to be beyond the ken of lay people—is resolved by just such a lay decisionmaker. Worst of all, it is resolved without the benefit of knowing how the experts divide themselves between the two positions.

IV. SOLUTIONS

If adversarial expertise is the problem, then an obvious solution would be to make courtroom expertise nonadversarial in antitrust trials. The vast body of literature on the hired gun problem is filled with proposals for removing the adversarial aspect of expert testimony. Most of these solutions are variations on the same theme; they all involve a neutral process for selecting one or more “disinterested” experts.¹⁸⁵ This Part first examines three versions of this idea for their ability to better reveal the actual distribution of academic opinion on economic issues relevant to antitrust.

I then move beyond solutions aimed at “disinterested” expertise and suggest two solutions that, while still allowing parties to select their own experts, may better reveal whether an opinion reflects a consensus or is a minority view in a scientific community. First, I suggest that in the process of admitting an expert’s opinion, the judge should take testimony on how widely held that opinion is within his academic community. Second, I borrow a procedure from jury selection, suggesting that each side of an antitrust suit be allowed a small number of peremptory strikes against his opponent’s expert witness list. This would effect a significant change in procedure, but is perhaps justified as an experiment in an area of law where the battle-of-the-experts problem is especially costly.

¹⁸³ Frank H. Easterbrook, *On Identifying Exclusionary Conduct*, 61 NOTRE DAME L. REV. 972, 979 (1986).

¹⁸⁴ On the one hand, the average juror has less education and certainly less exposure to antitrust issues than a judge. But on the other hand, a jury benefits from having “many minds” bringing their reasoning and knowledge to bear on a question, which can, under certain circumstances, raise the accuracy of decisionmaking. See Vidmar & Diamond, *supra* note 96, at 1134, 1177.

¹⁸⁵ See, e.g., Carl Kaysen, *An Economist as the Judge’s Law Clerk in Sherman Act Cases*, 12 A.B.A. SEC. ANTITRUST L. 43 (1958); Posner, *supra* note 22; Robertson, *supra* note 3; Note, *Improving Judicial Gatekeeping: Technical Advisors and Scientific Evidence*, 110 HARV. L. REV. 941 (1997); Karen Butler Reisinger, Note, *Court-Appointed Expert Panels: A Comparison of Two Models*, 32 IND. L. REV. 225 (1998).

A. Existing Proposals: The Disinterested Expert

1. *Court-Appointed Experts.*—Under the seldom-used Federal Rule of Evidence 706,¹⁸⁶ a district court judge can appoint an expert to advise him on technical matters, such as antitrust economics, as well as to testify in front of a jury.¹⁸⁷ If used more widely, judges could use this approach to appoint experts selected because they occupy mainstream positions in economics and can express those positions clearly to laypeople.¹⁸⁸ It would also eliminate the problem of a partisan expert feeling like he plays for a team to which he must be loyal.¹⁸⁹ His value to the trial is not dependent on whether he can give his client good news. Under this system, the court is his client, whose interest should be in truth and justice rather than the success of one party.

The word “should” in the last paragraph raises an obvious and perhaps devastating criticism of court-appointed expert witnesses: judges, like parties, are biased when it comes to choosing economic experts.¹⁹⁰ For the parties, bias comes most powerfully from wanting to win, but for the judge, the source of bias is ideological. Economics, because of its tendency to make contingent claims rather than prove scientific truths, and because of its redistributive consequences, is political.¹⁹¹ In a world where judges appoint expert economists, we would expect an antitrust minimalist to testify at every Republican appointee’s trial and a pro-liability/pro-regulation witness to testify at every Democratic appointee’s trial. This might give antitrust trials some predictability, but not the kind we are looking for.

¹⁸⁶ The infrequency of Rule 706’s use has preoccupied evidence scholars. See I FAIGMAN, *supra* note 93, § 1:38, at 113 (“Although rules of evidence have long provided for court-appointed experts, judges are reluctant to embrace this option.”); Elliott, *supra* note 1, at 501–02; Gross, *supra* note 2, at 1190; Robertson, *supra* note 3, at 198–201. In *Improving Judicial Gatekeeping: Technical Advisors and Scientific Evidence*, *supra* note 185, the author cites a 1993 survey revealing that 80% of responding district judges had never appointed an expert. *Id.* at 947 n.47.

¹⁸⁷ FED. R. EVID. 706. An early incarnation of this idea was put forth by Learned Hand in 1901: “It is obvious that my path has led to a board of experts or a single expert, not called by either side, who shall advise the jury of the general propositions applicable to the case which lie within his province.” Hand, *supra* note 12, at 56.

¹⁸⁸ Cf. Posner, *supra* note 22, at 1539–40 (discussing common objections to court-appointed experts).

¹⁸⁹ See sources cited *supra* note 23.

¹⁹⁰ See Elliott, *supra* note 1, at 503 (“If every expert comes to court with an ‘axe to grind,’ then why add the court’s expert, with his or her own partisan beliefs and commitments, to those of the parties.”). The problem of the biased court-appointed expert is amplified by the fact that the jury might give special weight to this seemingly “independent” expert. Wood, *supra* note 13, at 94; cf. Gross, *supra* note 2, at 1193 (“Some couch this argument in strong rhetorical terms: the appointment of an expert witness by the court compromises the impartiality of the judge (who associates her prestige with a particular witness) . . .”).

¹⁹¹ Cf. AREEDA & HOVENKAMP, *supra* note 41, ¶ 309, at 165–66 (discussing the normativity of economic science).

Even a nonbiased judge will have a difficult time determining whether an expert represents the majority view. What criteria should she use in determining the status of an expert's opinion? Most experts who want to be hired will want to describe themselves as occupying the heartland of economic thought. So in looking for help, a judge would have to make the very judgments she needs help for, resulting in a kind of "experimenter's regress."¹⁹² Rule 706 also has serious practical limitations. One theory put forth for why judges so infrequently use Rule 706 is that they do not know how to go about finding a reliable expert.¹⁹³ There is no "yellow pages" of neutral, reliable practitioners of economics.¹⁹⁴ And Rule 706 requires both parties to share the cost of the appointed expert, which has given some judges pause when the means of the parties are unequal.¹⁹⁵

Part of the problem with allowing judge-appointed expert witnesses is that the process is ad hoc and one-off. Instead, some argue that a region (perhaps at the federal district level) could have a permanent economic expert, or even a panel of experts, shared by judges of diverse ideological outlooks.¹⁹⁶ A panel of economic experts has the obvious advantage of numbers over a single witness; a panel draws a larger sample from expert practitioners and so is less likely to reflect an outlying view.¹⁹⁷ These experts would develop track records over time that judges, academics and the public could criticize. Too much fringe economics could cost a staff economist his job. A semi-permanent position would give the experts an opportunity to learn the ins and outs of the most common economic puzzles to come up during antitrust trials.¹⁹⁸ He could become not only an expert in economics but also an expert in antitrust litigation.

¹⁹² Experimenter's regress describes the puzzle of scientific measurement, when "'facts' can only be generated by 'good' instruments but 'good' instruments can only be recognized as such if they produce 'facts.'" Benoît Godin & Yves Gingras, *The Experimenters' Regress: From Skepticism to Argumentation*, 33 *STUD. HIST. & PHIL. SCI.* 137, 137–38 (2002).

¹⁹³ Reisinger, *supra* note 185, at 238.

¹⁹⁴ Justice Stephen Breyer, an advocate for improved scientific decisionmaking by courts, points to a few new institutions as sources of relief. First, Justice Breyer suggests that collaboration between the Federal Judicial Center and the National Academy of Sciences, initiated in the late 1990s, will improve "communication among the science, engineering, and legal communities." Stephen Breyer, *Introduction to FED. JUDICIAL CTR., REFERENCE MANUAL ON SCIENTIFIC EVIDENCE* 1, 5 (2000). Second, Justice Breyer praises the collaboration between the American Association for the Advancement of Science and the Science and Technology Section of the ABA, designed to "aid the courts in finding skilled experts." *Id.* at 7–8.

¹⁹⁵ See *Interview with Judge Vaughn Walker*, *supra* note 74, at 28 ("The problem that has kept me from [appointing an expert] most frequently is the inability of one party to share the cost."). Further, actually collecting the expert's fee from the party whose side the expert disfavors could be difficult. See Wood, *supra* note 13, at 94.

¹⁹⁶ See Jack B. Weinstein, *Improving Expert Testimony*, 20 *U. RICH. L. REV.* 473, 490 (1986).

¹⁹⁷ See Elliott, *supra* note 1, at 504 ("The panel [would be] intended to give the jury a picture of the range and distribution of scientific opinion."); see also Carl Kaysen, *supra* note 185, at 46–47.

¹⁹⁸ Vermeule discusses this phenomenon in expert panels used in agency decisionmaking: "[P]anelists whose members serve for long periods may develop 'endogenous expertise' through experience and

Again, this strength is also a weakness. The longer an economist works for a court, the more she becomes a part of the legal world. Eventually she risks losing her status as an active member of her academic community and becoming a pseudo-lawyer. Part of the value of an expert witness is her status as an outsider—both because it assures her expertise in her field but also because the more an expert becomes savvy about the law, the more we worry her role as an advisor is legal or political, not just technical.¹⁹⁹

Another drawback of this suggestion is that it shifts the cost of economic expertise from the parties to the court. This has two potentially pernicious effects. First, and most simply, it makes the judiciary pay for something it used to get for free, putting a burden on its budget and, eventually, the taxpayer. But perhaps the larger problem is the other side of the coin. Under the current regime, parties have to assess how important expert economic testimony is to their case, and invest accordingly.²⁰⁰ With court-appointed panels of experts, they get something for free that they used to pay for.²⁰¹ This might result in parties overusing staff economists since they no longer internalize the cost of doing so.²⁰²

2. *Two Experts Agree on a Third.*—In addressing the problem of dueling experts, several commentators have suggested that we borrow “a leaf from a common method of selecting arbitrators: Each party chooses an arbitrator and the two arbitrators choose a neutral, who generally casts the deciding vote.”²⁰³ Using this model, Judge Posner suggests that experts

institutional learning over time. In such cases, the panel’s initial findings and predictions may be flawed, but their quality will systematically improve over time.” Vermeule, *supra* note 16, at 2267 (footnote omitted).

¹⁹⁹ For large-scale litigation, the problem of entrenchment may be solved by appointing ad hoc panels of experts to make findings of fact that would only serve for one trial. For example, while presiding over a multidistrict product liability action against breast implant manufacturers, District Judge Sam C. Pointer, Jr. achieved homogeneity of expert opinion over many jurisdictions when he appointed a national expert panel to investigate the causal link between implants and injury. See Lars Noah, *Scientific “Republicanism”: Expert Peer Review and the Quest for Regulatory Deliberation*, 49 EMORY L.J. 1033, 1047 (2000); Reisinger, *supra* note 185, at 227.

²⁰⁰ Vermeule, *supra* note 16, at 2252 (“[R]ational parties will invest in hiring additional experts up to the point at which the marginal increase in the expected payoff equals the marginal cost of hiring the next expert.”); cf. Luke M. Froeb & Bruce H. Kobayashi, *Evidence Production in Adversarial vs. Inquisitorial Regimes*, 70 ECON. LETTERS 267, 268 (2001) (presenting a model that recognizes that “[e]vidence is costly to produce, so the decision of how much evidence to produce is an optimal stopping problem for each of the litigants”).

²⁰¹ The parties could be required to pay to use the staff experts, and that fee could go towards the experts’ salaries and benefits. But their parties’ willingness to pay would be low since they are rolling the dice about whether the expert or panel will see things their way.

²⁰² Note, however, that under the current regime there may already be significant overuse of experts. When dueling experts’ informational inputs cancel each other out, the battle resembles an arms’ race and the result is overinvestment in a socially wasteful competition.

²⁰³ Posner, *supra* note 22, at 1539; see also Daniel L. Rubinfeld, *Econometrics in the Courtroom*, 85 COLUM. L. REV. 1048, 1096 (1985).

from each side of a trial together agree on a third expert who would be appointed by the court to testify either alongside or instead of the parties' experts.²⁰⁴ The purpose of this is to solve the appearance of deadlock between two qualified experts when really one expert represents the mainstream belief and the other the fringe.

What kind of economic testimony would result from Posner's technique? There are several possibilities. First, we might think that the two economists will agree on some middle ground—a kind of average of their perspectives. If we imagine a spectrum from hawk to dove, the third economist might be somewhere around blue jay. If there is considerable consensus in the economic community, the middle ground is likely to reflect it. If the two-appoint-third system results in an averaging, it might work to get at consensus.

But we might think that the two parties will not be willing to agree to an average of their beliefs. Instead, the two economists may only agree on an unobjectionable third expert. For this, we might imagine not a spectrum of economic beliefs, but a Venn diagram of overlapping beliefs. A hawk believes propositions A through S, and a dove believes propositions H through Z. They would agree on an economist that believes H through S, since neither party could object to any of his beliefs. This strategic model might not help solve the problem of eliminating the fringe belief. Suppose the fringe belief is proposition A, held by the hawk in this hypothetical, and not contained within the set of propositions believed by the dove or the "unobjectionable" economist. If a case turns on whether A is true, the hawk side has no reason to agree to any expert who does not believe A. The parties would reach an impasse, and the court would need to find another mechanism to select an expert. Thus, the value of this solution depends on empirical questions: how are opinions distributed among experts, and will parties be able to agree?²⁰⁵

3. "*Blind Expertise.*"—Professor Christopher Tarver Robertson has offered a fresh take on neutral experts in his article *Blind Expertise*, in which he proposes a double-blind procedure for parties to solicit expert opinion on a case.²⁰⁶ In the article, Robertson identifies expert bias, inevitable in a regime where experts are paid by and have extensive contact

²⁰⁴ This is similar to the German system as described by John Langbein. See Langbein, *supra* note 23, at 837 ("[T]he code requires the court to use any expert upon whom the parties agree . . .").

²⁰⁵ Rigorously answering these questions would be a daunting task. There are many economic propositions that are both controversial and essential to antitrust policy, and mapping a picture of academic opinion on them would require intense research. But the Cochrane Reviews, which taxonomize scholarly opinion about health and disease, overcame similar challenges. See *Cochrane Reviews*, THE COCHRANE COLLABORATION, <http://www.cochrane.org/cochrane-reviews> (last visited Aug. 1, 2012).

²⁰⁶ Robertson, *supra* note 3.

with their side, as the biggest problem in adversarial expertise.²⁰⁷ To protect experts from the influence of the parties and to prevent parties from cherry-picking favorable experts, Robertson proposes a third-party intermediary that would receive fact patterns from a litigation party and pass them along to a qualified expert for his opinion.²⁰⁸ The party would not know which expert was being asked, nor would the expert know which side was doing the asking.²⁰⁹ The expert would be paid no matter what his opinion turned out to be.

Robertson's "blind expertise" attacks the seemingly intractable problem of hired guns, and he argues that it does so without significant changes to the current structure of litigation or rules of evidence.²¹⁰ Just adding the blind procedure as an option, without even making it mandatory, might result in its extensive use. Because opinions obtained through the intermediary according to the double-blind procedure would be highly credible due to reduced bias, blind expertise would be more valuable than partisan expertise. Thus the parties would find themselves in a prisoner's dilemma: whether they think their opponent will try for a blind expert or not, their best move is to try for one themselves.²¹¹

Although Robertson emphasizes bias as the source of disagreement between experts, his innovation can address the battle-of-the-expert problem even if the source of heterogeneity among expert opinion is not bias or bad faith but is instead reasonable scientific disagreement. Blind expertise addresses one dimension of the "bad sample" of expert opinion discussed in Part I. If the intermediary can impartially select an expert from a group of experts that reflects the distribution of opinion on a scientific matter, the sample will be representative. The sample will still be small, but Robertson makes a strong point that since we can expect both sides to voluntarily use the procedure, the only way blind expertise can result in a wrong outcome—in my terminology, a nonconsensus outcome—is if both randomly chosen experts hold the same outlying view.²¹² Indeed this seems unlikely.

The trouble with Robertson's idea, like many solutions to the hired gun problem, is logistical. Blind expertise requires an intermediary that is scientifically savvy, unbiased, and, given the volume of work we could

²⁰⁷ *Id.* at 184–88.

²⁰⁸ *Id.* at 206–09.

²⁰⁹ *Id.* at 207–08.

²¹⁰ *Id.* at 213 ("The blind procedure is designed to work within existing institutions and procedures, requiring no major changes to substantive or procedural law.").

²¹¹ *Id.* at 230–41. Subsequent empirical work by Professor Robertson confirms the intuition that juries give more weight to "blind expertise," making it more valuable to the side it favors. See Christopher T. Robertson & David V. Yokum, *Effect of Blinded Experts on Mock Jurors' Assessments of Credibility and Verdicts in Civil Trials*, 9 J. EMPIRICAL LEGAL STUDIES (forthcoming Dec. 2012), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1884765.

²¹² Robertson, *supra* note 3, at 215–16.

expect to pass through it, very large. Robertson makes a plausible suggestion for the intermediary: the American Association for the Advancement of Science (AAAS).²¹³ As a nonprofit organization, it would not have a financial motive to influence the outcome of cases. In this sense, it would be at least as “neutral” as court-appointed experts, and probably more so. And the association has access to high-level and broad scientific knowledge,²¹⁴ so it probably is competent to compile pools of experts on recurring issues, and to select others ad hoc.

But Robertson understates how much work the intermediary will have to perform. He accurately notes that if part of the benefit of blind expertise is that the expert does not know who is soliciting his opinion, then the intermediary will have to present the question and the data in a way that suppresses this identity. This would likely involve substantial work on the part of the intermediary, requiring him to actually engage with the science of the case. For that, the intermediary would himself need to be an expert, and would have to be paid accordingly. Additionally, the blind expert’s opinion could be very costly since it must be “explicit, concrete, and complete” to be helpful.²¹⁵ But according to Robertson’s model it, will be wasted (that is, unused in litigation) about half the time.

Even if Robertson’s idea is costlier than he acknowledges, it may be worth considering in the context of antitrust trials. The benefits of his system are numerous and difficult to quantify, and so could offset even such a complicated system as “blind expertise,” especially in antitrust where the science is complicated and the financial stakes high. Promoting heartland economic views in antitrust trials would allow businesses to be more confident in making decisions *ex ante* that they will not be sued and subject to triple damages. And Robertson identifies hidden benefits beyond mere informational efficiency, suggesting that blind expertise might even eliminate the need for costly *Daubert* challenges. If blind expertise is worth trying at all, it is probably worth trying first in the antitrust context.

B. New Directions: Tinkering with Adversarial Expertise

Existing solutions, however, may not be enough to address the intractable (and ancient!) problem of the battle of the experts. The very fact that they exist, and some of them have for a long time, but are rarely used and have not solved the problem in a meaningful and lasting way suggests that fresh thinking is called for. Antitrust is an excellent place to start experimenting with new solutions because of its heavy dependence on academic consensus for predictable and reasonable results. Starting with

²¹³ *Id.* at 206.

²¹⁴ See AAAS: ADVANCING SCIENCE, SERVING SOCIETY, <http://www.aaas.org> (last visited Aug. 1, 2012) (describing AAAS’s goals and competencies).

²¹⁵ Robertson, *supra* note 3, at 209.

just one area of law, like antitrust, also makes sense because it can act as a kind of laboratory where success can be replicated or failure quarantined. To that end, this subpart suggests two new solutions to the problem of hidden consensus in antitrust litigation.

1. Taking Testimony on the Distribution of Expert Opinion.—Perhaps the simplest and least invasive solution to the problem of obscured consensus would be to admit evidence about the true distribution of expert opinion. Revealing this distribution would require a meta-expert, or someone knowledgeable about the state of expertise in an area of antitrust economics. Most experts are themselves also meta-experts: one of the qualifications of being an expert is having a good understanding of the existing literature and the state of consensus in your field. Relatedly, a good expert should know where his own opinion lies in the larger context of academic arguments. So a judge could simply require, or at least encourage, experts to testify not only about their opinions, but also about their opinions' statuses in the academy. After all, *Daubert* may have added new criteria of reliability to the old *Frye* standard of general acceptance in the scientific community, but it did not eliminate that criterion as a touchstone of admissibility.²¹⁶

The trouble with relying on a more emphatic use of *Daubert*'s general acceptance criterion is that reliable evidence of scientific consensus is difficult to gather, and if done within the adversarial process, likely to be subject to the same biases that influence all expert opinions. Objective measures of consensus are elusive, so self-interested testimony from an expert is as unpersuasive as it is un rebuttable. A party advocating the consensus view will be careful to emphasize, during direct testimony, that its view is shared by a significant majority of the experts. But a jury will properly discount an expert's claims of being in the majority, since they will know that an expert will want to appear that way.

Scientific consensus is defined within the relevant scientific community in a complicated and insular process.²¹⁷ An objective measure of academic consensus would have to go beyond merely asking whether the idea had been published in a peer-reviewed journal since journals publish works that are groundbreaking, not pieces that recreate the heartland of a discipline that passes for truth.²¹⁸ Frequent repetition or verification of an

²¹⁶ *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 593–94 (1993).

²¹⁷ See Jasanoff, *supra* note 2, at 347.

²¹⁸ Another objection to using peer review as a proxy for scientific consensus is that peer review serves a very different purpose in the academy:

Over the long haul, science may approach a gradual maturation of consensus, by virtue of what may be the nearest thing we have to a genuine marketplace of ideas, but the scientific community's various peer review techniques amount to little more than barriers to entry. They do not purport to anoint particular results as finally settling contested questions.

Noah, *supra* note 199, at 1046 (footnote omitted).

idea in different reputable journals might indicate that it represents a scientific consensus. But that inquiry is more complicated than merely tallying citations. Temporal considerations are relevant; perhaps more recent citations are “worth” more than old ones, but at the same time an older idea is more likely to be a consensus view.²¹⁹ The medical community actually performs such meta-analyses of scientific consensus on particular issues and publishes the results for practitioners to use in the form of the Cochrane Reviews.²²⁰ Presently, nothing of the same scale and rigor exists for economics. Perhaps economists could undertake a systematic meta-analysis of major economic issues in order to highlight consensus—and capture its informational benefits for trials—where it exists.

Even armed with knowledge about consensus, bringing it out in a trial setting will be difficult since a cross-examining attorney faces significant challenges in using it to discredit an outlying expert. Courtroom-ready experts, even in the minority, will be practiced at convincing a jury that the issue is far from settled, and a lay attorney lacks the familiarity with the relevant academic literature to convincingly engage an expert in his own game. This asymmetry of knowledge makes cross-examination of expert witnesses notoriously treacherous.²²¹ In the case of expert witnesses, an inexpert lawyer can never be sure what the answer to a particular question will be, and so control is virtually impossible.²²² Some commentators have gone so far as to say that “the best cross-examination of an expert is none.”²²³ This problem, however, is not insurmountable and may be outdated. Attorneys should not shy away from diving into the substance of their case and developing a familiarity and comfort with the economic subject matter. As antitrust has become more economically savvy, so has the antitrust bar.

2. *Peremptory Strikes of Experts.*—A new suggestion comes from another process of selection that occurs in the courtroom: the selection of jurors. Outlying opinions threaten truthfinding enterprises, especially where a decision must be made unanimously.²²⁴ Perhaps this was the legitimate theory behind what is now the most illegitimate feature of the American jury system: the peremptory strike. In selecting a jury, the parties have two

²¹⁹ Shwed & Bearman, *supra* note 26, at 818.

²²⁰ The Cochrane Reviews feature over 6000 systematic reviews of health preventions and interventions. See *Cochrane Reviews*, *supra* note 205.

²²¹ Shelley Storer, *The Weight Versus Admissibility Dilemma: Daubert’s Applicability to a Method or Procedure in a Particular Case*, 1998 U. ILL. L. REV. 231, 248 (1998).

²²² Gross, *supra* note 2, at 1172–75.

²²³ ROBERT E. KEETON, TRIAL TACTICS AND METHODS § 3.29, at 155 (2d ed. 1973).

²²⁴ Cf. Michael S. Kang, *Voting as Veto*, 108 MICH. L. REV. 1221, 1267 (2010) (“Because criminal law generally requires a unanimous verdict for guilt, the government should be more concerned with avoiding a juror who is clearly biased against its respective case than trying to include a juror who is biased towards it.”).

opportunities to eliminate potential jurors from the panel. First they can strike an unlimited number of jurors for “cause.”²²⁵ These strikes are aimed at jurors whose outlying beliefs come from bias or an unwillingness to conform to the proper role of the juror.²²⁶ Then, parties are entitled to a second round of strikes from the jury, during which they can eliminate a small number of jurors for no reason at all.²²⁷

Most scholars agree that peremptory strikes are nothing but an opportunity for semi-sanctioned discrimination,²²⁸ but perhaps the failure of peremptory strikes lies in their execution, not in the underlying principle. In theory, peremptory strikes allow each side to eliminate outlying perspectives that are held in good faith; perspectives that do not result from juror bias or incompetence. Difference of opinion is, after all, inevitable and acceptable in doing what juries do: making social judgments and factual inferences. But the law wants to harness the epistemic value of a group of peers agreeing on a judgment. Perhaps it was once imagined that peremptorily striking jurors would allow the band of social opinion to be narrowed so that consensus would be possible and a jury could speak in harmony.

The peremptory strike failed at this aim, and it failed spectacularly, because in the context of jury selection, peremptory strikes cannot reliably and neutrally eliminate outlying social beliefs and values. The problem is that the kind of information about jurors that comes out during the limited and artificial process of voir dire is not the kind of information that should stand in for social values. At the end of questioning, lawyers know a juror’s gender, his approximate age, his self-reported views on perhaps a few social issues, and, most problematically, his race. When these stand in for ideas about social norms and community values, prejudice is inevitable.²²⁹

The anatomy of this failure suggests that the peremptory strike can be resuscitated in a context where we can more accurately, and without discrimination, call someone an outlier. In the expert witness context, lawyers can learn about the relevant views of witnesses without reverting to stereotypes or prejudice, so we might import the sickly peremptory

²²⁵ 2 CHARLES ALAN WRIGHT & PETER J. HENNING, FEDERAL PRACTICE AND PROCEDURE § 382, at 594 (4th ed. 2009).

²²⁶ See Karen M. Bray, Comment, *Reaching the Final Chapter in the Story of Peremptory Challenges*, 40 UCLA L. REV. 517, 519 (1992).

²²⁷ Antony Page, *Batson’s Blind-Spot: Unconscious Stereotyping and the Peremptory Challenge*, 85 B.U. L. REV. 155, 157–58 (2005).

²²⁸ See, e.g., Charles J. Ogletree, *Just Say No!: A Proposal to Eliminate Racially Discriminatory Uses of Peremptory Challenges*, 31 AM. CRIM. L. REV. 1099 (1994); Page, *supra* note 227.

²²⁹ See Edward S. Adams & Christian J. Lane, *Constructing a Jury that Is Both Impartial and Representative: Utilizing Cumulative Voting in Jury Selection*, 73 N.Y.U. L. REV. 703, 707 (1998) (“Faced with making exclusionary decisions on the basis of limited information, attorneys naturally rely on group stereotypes”); Page, *supra* note 227, at 158 (“At best, a peremptory challenge is an educated guess, whereas at worst it is merely the expression of naked prejudice.”).

challenge into an environment where it can be healthier by allowing each side of an antitrust dispute to exercise a small number of strikes against their opponents' experts.²³⁰ A fringe expert position is, by definition, one held by a small minority of qualified experts. In the small community that is industrial organization economics, this may be only a handful. If each party to an antitrust suit were given the right to peremptorily strike three or four experts from their opponents' witness list, it might effectively confine testimony to only mainstream propositions.²³¹

Procedure for peremptory expert strikes would have to be carefully tailored to prevent inefficient gamesmanship. For example, the opportunity to strike should come after the experts have had some opportunity to state their views so that the parties can work with full information about how "fringe" the expert opinion is. But a party will want to impose the maximum costs on his opponent by requiring them to pay several (at least one more than the maximum strikes allowed) experts to prepare testimony. In many cases, merely the name of an expert will tell the opposition that his beliefs are outlying. But not all minority-view economists are well known, and in any case merely requiring a name will encourage a party to seek out lesser-known experts.

Some kind of expert report is necessary, therefore, but a full workup of the economics relevant to the case would be very expensive and tremendously wasteful. Instead, strikes should occur after an expert prepares a preliminary examination of the evidence, but before the expert invests substantial time in preparing a trial-ready report. This will, of course, result in wasted effort and money, but perhaps this prospect of waste will chasten parties into preparing only experts that their opponents will not object to. Under the shadow of peremptory strikes,²³² parties might

²³⁰ Something akin to this is already permitted, although frowned upon. One party can eliminate his opponent's potential experts by hiring them himself, and thus conflicting them out. This practice, known as "parking" experts, is wasteful because it necessarily involves one side hiring more experts than it needs, but it may prove worthwhile in some circumstances. For a discussion of "parking" experts, see Gross, *supra* note 2, at 1130.

²³¹ This process would capture the "centrist bias" Michael Kang associates with veto voting, or voting according to negative preferences. In this way, it could bias decisionmaking towards the consensus view. See Kang, *supra* note 224, at 1260–62. For his discussion of peremptory strikes of jurors as negative voting, see *id.* at 1267–71.

²³² Game-theoretical analysis suggests that the process of proposing and striking each expert should happen sequentially, rather than as a simultaneous game. If the procedure were set up to be simultaneous, each party would present $N + 1$ experts, where N is the maximum number of allowed strikes. Then each side would strike the maximum, leaving the least extreme expert standing. This would require finding, briefing, and hearing testimony from all $N + 1$ experts on each side, or $2(N + 1)$. However, if the process for striking experts was designed to be a repeat, sequential game, with each side presenting one expert at a time, the process would only rarely require all $2(N + 1)$ experts to appear. For example, suppose a plaintiff presents expert A for consideration. The defendant will strike A only if it believes that A is one of the N experts in the field who are most damaging to its defense. In other words, it will only choose to use one if its precious N strikes against one of the N worst offenders. Knowing this, and assuming that firing, preparing, and presenting an expert is costly, the plaintiff will not call A in

themselves avoid fringe positions—or, even more fundamentally, suits and defenses that rely on them.²³³

Just like in the jury context, there would still be a “for cause” elimination round in the form of a *Daubert* hearing, but it would have to come after the peremptory challenges because a proper *Daubert* investigation into methodology requires a longer workup than just a preliminary report. But another advantage of the peremptory expert strike system is that *Daubert* hearings might be more straightforward and focus only on second-order factors influencing reliability. With the field of experts narrowed closer to the consensus, judges may be less often confronted with the manufactured dissensus problem, and so may not feel the need to torture *Daubert*. Of course it is still possible that the opposing experts will disagree. But if confronted with expert disagreement in the new regime, a judge may be more justified in thinking that disagreement in his courtroom accurately reflects disagreement in the academy.

CONCLUSION

The most effective solution to distorted economic opinion in antitrust trials will depend on an empirical question: what is the shape of disagreement among experts? Scientific consensus can come in different forms. It may look like a core cluster of opinion that has no meaningful disagreement, surrounded by a few outliers in the form of holdouts or mavericks. If this is the shape of consensus on an economic proposition, then the peremptory strike idea might work well to eliminate the outliers. But expert opinion can look more like a normal distribution, with the high center of the bell curve representing the consensus view. If this is the case, then peremptory strikes would eliminate only the most extreme tail-ends of the distribution, leaving parties to call experts from still-very-divergent and

the first place unless he believes his opinions are not so extreme as to get him struck by the defendant. The plaintiff’s dominant strategy, therefore, is to name the expert who is marginally less extreme than the N most extreme in the field—or the same expert that results from the simultaneous game—but without the cost of actual peremptory strikes. Only when the sides disagree about where A is on the spectrum of opinion must they actually engage in strikes and incur the cost of wasted work. Thank you to Professor Edward Cheng for helping me work out the game theoretical consequences of sequential versus simultaneous strikes.

²³³ Some of the benefits of peremptory strikes can be gained by merely requiring parties to disclose to the trier of fact the names and reports of all the experts they approached in preparation for litigation. See Weinstein, *supra* note 196, at 484. See also *In re “Agent Orange” Prod. Liab. Litig.*, 105 F.R.D. 577 (E.D.N.Y. 1985). Stephen Easton makes the full-throated case for this solution in *Ammunition for the Shoot-Out with the Hired Gun’s Hired Gun*, noting that this would show the judge or jury just how difficult it was to find expert support for the economic proposition they are advancing at trial. Easton, *supra* note 11, at 527–55. The appeal of this solution lies in its simplicity: it does not require additional trial procedures, court infrastructure, or party expense—it is merely a disclosure. It would address the problem of selection bias that comes from having the opportunity to select and reject potential samples from a pool. If a party has to fish for an expert on its side, that should indicate that their position does not represent the consensus.

nonconsensus positions on the curve. In the case of a normal distribution of expert opinion, procedures that average the opinions, such as Judge Posner's tripartite panel, might be preferable.

The Supreme Court has made economic consensus the principle driver of antitrust policy and case outcomes, but has given lower courts an evidentiary procedure that systematically masks it. Moreover, the Court's delegation to academic consensus assumes that such a consensus exists among industrial organization economists, but without an objective measure of economic consensus, there is no way to verify that assumption.²³⁴ The procedure for antitrust expertise needs to be reimagined to shine light on the consensus views of industrial organization economists. The predictability, legitimacy, and accuracy of antitrust law depend on it.

²³⁴ Even a truly "neutral" expert will only provide reliable testimony when there is substantial consensus in his area of expertise. *See* Mnookin, *supra* note 12, at 1021.

