

Brave New World

Alex Kozinski*

I guess I am here as the *Daubert*¹ expert. Having said everything there was to say about the case, both right and wrong,² I am cast in the somewhat unwilling position of defending *Daubert*. As may have been clear from my remand opinion in *Daubert*,³ I was rather fond of *Frye*⁴ myself. Of course, we were bound — there had been an earlier ruling in the Ninth Circuit adopting *Frye*.⁵ Hence, when we heard *Daubert* the first time, we were pretty much bound by that earlier precedent. But the Supreme Court is called the Supreme Court because it is supreme — at least over the federal courts — and we have the task of applying the rules it prescribes.

I first want to discuss what we, the Ninth Circuit, actually did with the *Daubert* case, and I will then move on to discussing some points made by my distinguished colleagues. Now, recall that the rule before *Daubert* was *Frye*. *Frye* said that expert opinion will be admitted only if it is based on a scientific technique generally accepted in the scientific community.⁶ If you were an expert testifying as to X, you had to show that the technique by which you reached conclusion X was generally accepted in the scientific community. In *Daubert*, the Supreme Court threw out the *Frye* test and adopted basically a three-part test.

* Judge, United States Court of Appeals for the Ninth Circuit.

¹ *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579 (1993).

² Compare *Daubert v. Merrell Dow Pharms., Inc.*, 43 F.3d 1311 (9th Cir. 1995) (Kozinski, J.), with *Daubert v. Merrell Dow Pharms., Inc.*, 951 F.2d 1128 (9th Cir. 1991) (Kozinski, J.), vacated, 509 U.S. 579 (1993).

³ See *Daubert*, 43 F.3d 1311.

⁴ *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923), superseded by *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579 (1993).

⁵ See *United States v. Solomon*, 753 F.2d 1522, 1526 (9th Cir. 1985) ("Evidence based on a novel scientific technique is admissible if it is generally accepted as a reliable technique among the scientific community." (citing *Frye*, 293 F. at 1014)).

⁶ See *Frye*, 293 F. at 1014.

The first part, of course, is the premise that the witness must be an expert — somebody who is qualified in the field.⁷ Footnote two of the Supreme Court's opinion just waxes eloquent about what wonderful, terrific scientists the plaintiffs' experts in *Daubert* were.⁸ Nobody really challenged their expertise; they were, in fact, qualified. Some were doctors and others were scientists. Thus, the first part of the *Daubert* test was satisfied.

Now, the second step — and this is where *Daubert* and *Frye* diverge — is that the testimony of any expert must be based on the scientific method.⁹ The Supreme Court went on at some length about the scientific method and talked about how judges have to be gatekeepers.¹⁰ On remand, this posed a dilemma for us. By hypothesis, we have somebody who comes in and testifies as an expert — again, footnote two. You do not have a *Daubert* problem unless you have an expert. So by hypothesis it is somebody who is a scientist, qualified in the field. The expert testifies and says, "I used this method, and let me tell you, this is a scientific method." Well, he is a scientist, right? He ought to know. If he does not know, who does? What makes something a scientific method if not the fact that a bona fide scientist actually uses it?

Well, we considered that interpretation and decided that, no, the Court could not have meant that, or it would have stopped with footnote two,¹¹ as Judge Tochterman probably would.¹² The Court must have meant more. It did say more. The Court said that you have to see whether the evidence has been peer

⁷ See *Daubert*, 509 U.S. at 583 & n.2; *Daubert*, 43 F.3d at 1315 ("The question of admissibility only arises if it is first established that the individuals whose testimony is being proffered are experts in a particular scientific field . . .").

⁸ See *Daubert*, 509 U.S. at 583 n.2.

⁹ See *id.* at 590 (stating that in order to qualify as "scientific knowledge" under Federal Rules of Evidence 702, "an inference or assertion must be derived by the scientific method"); *id.* at 597 (indicating that Rule 702 is satisfied where proffered testimony is based on "scientifically valid principles").

¹⁰ See *id.* at 592-95, 597.

¹¹ See *Daubert*, 43 F.3d at 1315-16 ("[S]omething doesn't become 'scientific knowledge' just because it's uttered by a scientist; nor can an expert's self-serving assertion that his conclusions were 'derived by the scientific method' be deemed conclusive, else the Supreme Court's opinion could have ended with footnote two.").

¹² See Ronald W. Tochterman, *Daubert: A (California) Trial Judge Dissents*, 30 U.C. DAVIS L. REV. 1013 (1997).

reviewed and whether it has been published.¹³ You do not always have to have peer review and you do not invariably have to publish.¹⁴ None of this is conclusive, but you have to show not just that the witnesses are scientists; you have to show that they are acting like scientists — the “look and feel” test — kind of a trademark test for scientists.¹⁵

The Court tells us that in applying this new test, we should consider several factors. First, is the technique adopted generally accepted?¹⁶ I think we have heard that one before. It was called the *Frye* test.¹⁷ The first thing that a court has to look at is the *Frye* test, and if the evidence meets the *Frye* test, it is pretty much in. Second, has the evidence been peer reviewed?¹⁸ In addition, you have to consider the error rate, the Court also said.¹⁹ What is the error rate? I have no idea what this means, but there it is. The Court said this is not an exhaustive list.²⁰

On remand, we added one more factor to this list: Was this prepared for litigation?²¹ Is it bad to prepare for litigation? We said no. However, if a scientist, who is busy working away in a laboratory, has some findings and testifies to those findings to help the case, that is almost conclusive proof that the scientist has followed the scientific method.²² He is not in the business of testifying; he is just out there doing science that is relevant

¹³ See *Daubert*, 509 U.S. at 593-94.

¹⁴ See *id.* at 593 (“Many factors will bear on the inquiry, and we do not presume to set out a definitive checklist or test.”).

¹⁵ For a highly illuminating and entertaining discussion of the proper scope of protection for trademarks that serve not just as source identifiers, but also as profitable commodities in themselves, see Alex Kozinski, *Trademarks Unplugged*, 68 N.Y.U. L. REV. 960 (1993), reprinted in 84 TRADEMARK REP. 441 (1994).

¹⁶ See *Daubert*, 509 U.S. at 594.

¹⁷ See *Frye v. United States*, 293 F. 1013, 1014 (D.C. Cir. 1923), superseded by *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579 (1993).

¹⁸ See *Daubert*, 509 U.S. at 593-94.

¹⁹ See *id.* at 594.

²⁰ See *id.* at 593.

²¹ See *Daubert v. Merrell Dow Pharms., Inc.*, 43 F.3d 1311, 1317 (9th Cir. 1995) (“One very significant fact to be considered is whether the experts are proposing to testify about matters growing naturally and directly out of research they have conducted independent of the litigation, or whether they have developed their opinions expressly for purposes of testifying.”).

²² See *id.* (“That the testimony proffered by an expert is based directly on legitimate, preexisting research unrelated to the litigation provides the most persuasive basis for concluding that the opinions he expresses were ‘derived by the scientific method.’”).

and happens to testify. That is an inclusion test. If you meet that test, you are pretty much in; almost certainly under our reading of *Daubert*. But if not, the court has to look at the evidence and determine, even though they are scientists, whether they are acting like scientists.²³

Here is what we found: All the expert scientific evidence in the *Daubert* case involving limb reduction defects was manufactured for purposes of the litigation.²⁴ These were all real scientists, to be sure, but none of them had been doing research in the field before they were called upon to testify in the case.²⁵ Their interest in this particular area of science was entirely for the litigation. That is not so bad. Sometimes you start doing some litigation and, like Archimedes in the bathtub, you stumble across something useful.²⁶ But if you are a scientist, what would you do? You would certainly testify about it, but waste nothing. You know how it is: you start with a law review article, turn it into a speech and then an op/ed piece; you recycle everything.²⁷ If a scientist comes up with something in litiga-

²³ See *id.* at 1317-18 ("If the proffered expert testimony is not based on independent research, the party proffering it must come forward with other objective, verifiable evidence that the testimony is based on 'scientifically valid principles.'").

²⁴ See *id.* at 1317 ("We have examined carefully the affidavits proffered by plaintiffs' experts, as well as the testimony from prior trials that plaintiffs have introduced in support of that testimony, and find that none of the experts based his testimony on preexisting or independent research.").

²⁵ See *id.* ("While plaintiffs' scientists are all experts in their respective fields, none claims to have studied the effect of Bendectin on limb reduction defects before being hired to testify in this or related cases.").

²⁶ As the story goes: While relaxing in a public bath in Syracuse (the ancient Greek city-state in Sicily), Archimedes, the famous Greek scientist, came upon the idea that he could determine whether the King's crown was pure gold by measuring the amount of water it displaced compared with the amount displaced by an equal weight of pure gold. So overjoyed with the excitement of his discovery — known as Archimedes's principle — he leapt from his bath and ran naked through the streets shouting "Eureka!" ("I have found it"). As it turned out, the King was none-too-happy. See 13 THE NEW ENCYCLOPEDIA BRITANNICA 930-31 (15th ed. 1986) (discussing Archimedes's principle and story behind it). For a slightly different take on the story of Archimedes, see Myra Jehlen, *Archimedes and the Paradox of Feminist Criticism*, 6 SIGNS 575 (1981).

²⁷ See, e.g., Alex Kozinski, *Brave New World*, 30 U.C. DAVIS L. REV. 997 (1997) (recycling speech delivered on January 31, 1997 at the University of California at Davis School of Law symposium, "International Perspectives on Scientific Evidence"); Alex Kozinski, Speech delivered to the University of California at Davis School of Law symposium, "International Perspectives on Scientific Evidence" (January 31, 1997) (based in large part on *Daubert v. Merrell Dow Pharms., Inc.*, 43 F.3d 1311 (9th Cir. 1995) (Kozinski, J.)); see also Alex Kozinski,

tion, you would expect him to get it peer reviewed. You would expect him to get it published. You would expect somebody in the community, other than the folks involved in the litigation, to take an interest in it. Imagine if, for purposes of litigation, you testified that you can create fusion in a bathtub. It would make a stir. People all over the world would undoubtedly be interested in that. People with bathtubs would be interested. You would expect that if there had been enough time and thought given to it, they would go out and try to do what scientists normally do. If that happens and it gets peer reviewed, we do not much care whether they generated the research for litigation because, at that point, science has engaged them.²⁸

On remand in *Daubert*, we found there had been a conspiracy of silence. None of the supposedly scientific reports had been published, none were circulated to other scientists, none were commented upon.²⁹ As we said in the opinion, there seemed to be an understanding out there that this was not science, it was litigation.³⁰ These were advocates; they created their reports to

Trademarks Unplugged, 68 N.Y.U. L. REV. 960 (1993) (recycling address delivered as Boal Memorial Lecture at New York University School of Law on September 16, 1993), reprinted in 84 TRADEMARK REP. 441 (1994); Alex Kozinski, *What I Ate for Breakfast and Other Mysteries of Judicial Decisionmaking*, 26 LOY. L.A. L. REV. 993 (1993) (recycling speech delivered on March 19, 1993 at Symposium on California Judiciary, Loyola Law School, Los Angeles); Alex Kozinski, *The Wrong Stuff*, 1992 BYU L. REV. 325 (recycling speech presented at Brigham Young University, J. Reuben Clark School of Law on January 21, 1992); Alex Kozinski, *For an Honest Death Penalty*, N.Y. TIMES, March 8, 1995, at A15 (recycling Alex Kozinski & Sean Gallagher, *Death: The Ultimate Run-On Sentence*, 46 CASE W. RES. L. REV. 1 (1995) (recycling lecture delivered at Case Western Reserve University School of Law as part of Sumner Canary memorial lecture series)).

²⁸ See *Daubert*, 43 F.3d at 1318 ("That the research is accepted for publication in a reputable scientific journal after being subjected to the usual rigors of peer review is a significant indication that it is taken seriously by other scientists, i.e., that it meets at least the minimal criteria of good science.").

²⁹ See *id.*

Bendectin litigation has been pending in the courts for over a decade, yet the only review the plaintiffs' experts' work has received has been by judges and juries, and the only place their theories and studies have been published is in the pages of federal and state reporters. None of the plaintiffs' experts has published his work on Bendectin in a scientific journal or solicited formal review by his colleagues. Despite the many years the controversy has been brewing, no one in the scientific community — except defendant's experts — has deemed these studies worthy of verification, refutation or even comment.

Id. (footnote omitted).

³⁰ See *id.* ("It's as if there were a tacit understanding within the scientific community

feed to juries, not for use by the scientific community. Moreover, most of the experts said only Bendectin “could” cause birth defects, or it “might” cause birth defects.³¹ There was only one expert who said that Bendectin actually caused the deformities.³² *Daubert* tells us the fact that he is a scientist and the fact that he comes up with a conclusion is not enough.³³ He has to fill in the in-between parts. He has to convince us that the stuff in-between the “I have examined the children” and the conclusion, “the Bendectin caused the defects,” was reached by the scientific method.

Remember, this is not *Frye*. It does not have to be the chain of analysis or technique that most scientists agree with. It could be Archimedes, so long as the methods employed are the normal methods of science. It cannot be done with a Ouija Board. It cannot be done by throwing pennies in a fountain. It cannot be done by saying “trust me.” It is just not good enough. We have to see you do the things of science. In *Daubert* we found, as the Sixth Circuit had previously, that personal opinion, not science, testifies here.³⁴

Most of the evidence in *Daubert* failed on the ground of insufficient showing of scientific method, but not all of it. We considered whether we should, in fairness, send the case back to the district court. We considered whether, because the standard had changed so much, we should send the case back to let plaintiffs make a new showing — let them shore up the testimony to fit the *Daubert* standard.³⁵

Instead, at this point, we looked at the third step in *Daubert*. Here is where the Court, I thought, had been really on target. *Daubert* said the testimony has to “fit.”³⁶ It is not enough that it is scientific. It has to be relevant to something in the case; it has to make a difference. Consider Justice Blackmun’s example:³⁷

that what’s going on here is not science at all, but litigation.”).

³¹ See *id.* at 1320-21.

³² See *id.* at 1319.

³³ See *id.* (“We’ve been presented with only the experts’ qualifications, their conclusions and their assurances of reliability. Under *Daubert*, that’s not enough.”).

³⁴ See *id.* (citing *Turpin v. Merrell Dow Pharms., Inc.*, 959 F.2d 1349, 1360 (6th Cir. 1992)).

³⁵ See *id.* at 1314-15, 1319-20.

³⁶ *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 591 (1993).

³⁷ See *id.*

He said if you bring in an expert about the phases of the moon, that may well be relevant when you are trying to figure out whether there was enough light. For example, if a particular witness were to testify about seeing a series of events, the phases of the moon might well be relevant to the question of whether he could see what he testified to. However, if you are trying to prove that the defendant was likely to be rabid because the moon was out, Justice Blackmun says the evidence is inadmissible. We realize that people will tell you that when the moon is full, people go berserk. I have seen *An American Werewolf in London*.³⁸ We know that people believe this, but it is not scientific. It does not fit with the theory of the case.

We looked at that third step in *Daubert*. This is where the case became really complicated because you have to ask yourself, under the substantive law, what does an expert have to say to make information useful, to make the evidence useful.³⁹ We looked at the substantive law of California. Of course, states can structure their substantive law almost any way they please. We applied California law, and California law said that the plaintiffs have to prove their case as to liability by a preponderance of the evidence.⁴⁰

Now, I want to talk a little bit about what plaintiffs' case looked like. This was not a case where the expert said, "I have examined these children and we have found traces of Bendectin in their bodies." Nor did they say, "[h]ere is the way Bendectin causes limb reduction defects." The experts presented largely epidemiological studies that showed an increased incidence of birth defects among children of mothers who took Bendectin.⁴¹ There is a background incidence of birth defects, about two or three percent,⁴² and there are limb reduction defects, which I

³⁸ AN AMERICAN WEREWOLF IN LONDON (Universal 1981). In the movie, "[a] young man is bitten by a wolf on the British moors, with terrifying results. [It is] [n]ot a spoof, but a full-blooded horror film that happens to have a sharp sense of humor — as well as a reverence for horror films past. Dynamite direction and script by [John] Landis [and] startling Oscar-winning makeup effects by Rick Baker" help to earn the film a three star rating. LEONARD MALTIN'S TV MOVIES & VIDEO GUIDE 28 (Leonard Maltin ed., 1989 ed.).

³⁹ See *Daubert*, 43 F.3d 1320-22.

⁴⁰ See *id.* at 1320 ("California tort law requires plaintiffs to show not merely that Bendectin increased the likelihood of injury, but that it more likely than not caused *their* injuries." (citing *Jones v. Ortho Pharm. Corp.*, 209 Cal. Rptr. 456, 460 (Ct. App. 1985))).

⁴¹ See *id.* at 1314, 1320.

⁴² See Jose F. Cordero & Godfrey P. Oakley, Jr., *Drug Exposure During Pregnancy: Some*

believe are one in a thousand even among children born to mothers who did not take Bendectin.⁴⁵ Thus, if you are looking at any one individual who has a limb reduction defect, there is some possibility that they would have suffered that defect even if their mother had not taken Bendectin. If you accept the proof offered by the plaintiffs' experts, there is some increase among children of women who took Bendectin, but none of them said that there is as much as a doubling of the probability.⁴⁴

This is where the law has some discontinuity. If you look at any one individual, you have to ask yourself the following question: Has he proven it is more likely than not that the defect was caused by the drug as opposed to other factors? If the incidence of limb reduction defects has more than doubled, the likelihood that any individual will suffer the injury as a result of Bendectin is more likely than not.⁴⁵ If the increase is less than a doubling, the probability is less than fifty percent. Therefore, if the probability is more than doubled, everybody recovers. If it is not doubled, nobody recovers.⁴⁶ While we recognized that there might be unjust results under this standard, we said that is a problem for state tort law to deal with.⁴⁷

The requirement that judges take a hard look at the methodology and at how the testimony of an expert interacts with the substantive legal standard is an important refinement of *Daubert*.

Epidemiological Considerations, 26 CLINICAL OBSTETRICS & GYNECOLOGY 418, 424-25 (June 1983).

⁴⁵ See *Turpin v. Merrell Dow Pharms., Inc.*, 959 F.2d 1349, 1353 (6th Cir. 1992).

⁴⁴ See *Daubert*, 43 F.3d at 1320-21 ("None of plaintiffs' epidemiological experts claims that ingestion of Bendectin during pregnancy more than doubles the risk of birth defects.").

⁴⁵ See *id.* at 1320.

In terms of statistical proof, . . . plaintiffs must establish not just that their mothers' ingestion of Bendectin increased somewhat the likelihood of birth defects, but that it more than doubled it — only then can it be said that Bendectin is more likely than not the source of the injury. Because the background rate of limb reduction defects is one per thousand births, plaintiffs must show that among children of mothers who took Bendectin the incidence of such defects was more than two per thousand.

Id.

⁴⁶ See *id.* at 1320 n.13 ("No doubt, there will be unjust results under this substantive standard. If a drug increases the likelihood of birth defects, but doesn't more than double it, some plaintiffs whose injuries are attributable to the drug will be unable to recover.").

⁴⁷ See *id.*

I think that the inquiry is far more pointed and ultimately it can allow more, better scientific evidence before the jury. There is this romantic view that we have faith in the jury and the jury can decide anything and will usually get it right. I think juries often do get it right. Unfortunately, the consequences when they get it wrong are staggering. The Bendectin litigation is a wonderful example. Look not only at the *Daubert* case, but at the whole series of lawsuits that were brought one after another after another after another. It is summarized in both of Peter Huber's books.⁴⁸ The question is how juries make decisions. Juries are kind of secret; we do not know much about what goes on. One reason to have the judges make the decision is that judges have to make decisions on a record that is reviewable, public, and open to criticism. Once something goes to the jury, it disappears behind closed doors.

Sometimes juries act out of passion. For example, a jury in an early Bendectin case found no liability, but wanted to award twenty thousand dollars to cover medical expenses anyway.⁴⁹ That is how juries think. There now have been a number of trials in the Bendectin cases, and the early trials established that there was no fault.⁵⁰ About eleven hundred cases were then consolidated.⁵¹ The defense offered to settle for 120 million dollars; an offer the plaintiffs rejected.⁵² The case then went to trial, and the defense won that case as well.⁵³ However, another jury awarded two million dollars to a six year old boy with club feet,⁵⁴ and still another jury awarded ninety-five million dollars

⁴⁸ See PETER W. HUBER, *GALILEO'S REVENGE: JUNK SCIENCE IN THE COURTROOM* 111-29 (1991) [hereinafter *GALILEO'S REVENGE*]; PETER W. HUBER, *LIABILITY: THE LEGAL REVOLUTION AND ITS CONSEQUENCES* 102 (1988) [hereinafter *LIABILITY*].

⁴⁹ See *Mekdeci v. Merrell Nat'l Lab.*, 711 F.2d 1510, 1512 (11th Cir. 1983); see also HUBER, *GALILEO'S REVENGE*, *supra* note 48, at 114 (describing jury finding, and judge subsequently overturning, "sympathy verdict" for plaintiff).

⁵⁰ See HUBER, *LIABILITY*, *supra* note 48, at 102.

⁵¹ See *id.*

⁵² After Merrell Dow made the settlement offer of \$120 million, the district court certified a "non-opt out" class for settlement purposes. Although a majority of the class counsel favored the settlement offer, several individual plaintiffs were successful in challenging the certification order. See *In re Bendectin Prods. Liab. Litig.*, 749 F.2d 300 (6th Cir. 1984) (issuing writ of mandamus vacating certification order of district court).

⁵³ See *U.S. Jury Clears a Nausea Drug in Birth Defects*, N.Y. TIMES, March 13, 1985, at A12; see also *In re Bendectin Litig.*, 857 F.2d 290, 294 (6th Cir. 1988); HUBER, *GALILEO'S REVENGE*, *supra* note 48, at 120.

⁵⁴ See HUBER, *LIABILITY*, *supra* note 48, at 102 (explaining that Merrell Dow won 12 of

to another child with a birth defect.⁵⁵ As of 1993, twenty juries had reached verdicts on the merits of the Bendectin birth defect link; Merrell Dow had won twelve of those and plaintiffs had won eight.⁵⁶ All the while, of course, the FDA continues to approve the drug,⁵⁷ and it is still sold in most parts of the world.

Due to the litigation, Bendectin was taken off the U.S. market because the manufacturer decided it just was not worth it.⁵⁸ This might not seem like a big deal. It is no big deal for men, and it is no big deal for most women, who are lucky enough to go through a pregnancy and not have extreme nausea. But there is a small group of women who have extreme nausea throughout their entire pregnancy — not just a little bit of morning sickness, but an extreme nausea, an inability to eat, to feed themselves, and to nourish their baby — whose health is imperiled and whose baby's survival is imperiled because they are unable to take nourishment.⁵⁹ It is not a big, burning problem for most people. However, for the parents involved, for the mother, the baby, and the father in that situation, having a drug available that enables the mother to take nourishment is critical.

Pulling Bendectin off the market in the face of vast numbers of studies that have revealed no scientific relationship between the drug and birth defects⁶⁰ is not a minor matter, something we ought to shrug off. It is a disaster. And Bendectin is just one example of the way litigation has been used as a tool of legislation.⁶¹ It is a tool of regulation when our administrative regula-

17 Bendectin cases in early 1970s).

⁵⁵ See HUBER, GALILEO'S REVENGE, *supra* note 48, at 121-22; Morton Mintz, *Deformed D.C. Boy Awarded \$95 Million; Bendectin Maker Penalized*, WASH. POST, July 15, 1987, at A1.

⁵⁶ See Joseph Sanders, *From Science to Evidence: The Testimony on Causation in the Bendectin Cases*, 46 STAN. L. REV. 1, 5 (1993) [hereinafter *From Science to Evidence*] (analyzing mass exposure cases with emphasis on Bendectin cases); Joseph Sanders, *Scientific Validity, Admissibility, and Mass Torts After Daubert*, 78 MINN. L. REV. 1387, 1433 (1994) [hereinafter *Scientific Validity*] (describing effect of *Daubert* on subsequent litigation).

⁵⁷ See *Scientific Validity*, *supra* note 56, at 1433.

⁵⁸ See HUBER, GALILEO'S REVENGE, *supra* note 48, at 127.

⁵⁹ See *id.* at 128-29.

⁶⁰ See *id.* at 126-27.

⁶¹ For a related discussion of how juries imposing punitive damages undermine the democratic process, see Alex Kozinski, *The Case of Punitive Damages v. Democracy*, WALL ST. J., Jan. 19, 1995, at A18 ("Far from imposing the will of the people, juries imposing punitive damages may be usurping the role of the legislature, thereby benefiting a few plaintiffs and their lawyers, but denying the large majority of the people goods and services that

tory agencies have said a product is safe, but juries have been misled into awarding damages. Think about the costs of running the machine that fends off litigation. It is just not worth it for a drug like Bendectin. Merrell Dow does not make enough money on it. It is a small market. It is very easy to crush, and it was crushed.

I now want to talk a little bit about criminal cases because I share Judge Tochterman's concern about them.⁶² It seems to me that this is where Judge Tochterman should embrace *Daubert* and reject the California rule. As he mentioned, in the *Alcala*⁶³ and *Page*⁶⁴ cases, the California courts rejected expert psychological and psychiatric testimony about whether the defendant was induced to give a confession that he ought not to have given. I commend to Judge Tochterman and to all of you the opinion of the United States Court of Appeals for the Seventh Circuit in *United States v. Hall*.⁶⁵ In that case, the defendant had been identified as a suspect in the killing of a little girl, whose decomposed body had been found in a field.⁶⁶ It was much too late to get any physical evidence, but they got the defendant in a room and they got him to confess.⁶⁷ It was a good confession. It was nice and thorough. The Seventh Circuit nevertheless reversed the conviction.⁶⁸ The defense wanted to present testimony that the defendant had a mental disorder which caused him to be a "wannabe" — somebody who wants to please authority figures.⁶⁹ He will agree to anything if put in the right situation. The trial court had excluded that evidence.⁷⁰ The Seventh Circuit said that, under *Daubert*, judges can no longer exclude such evidence. The judge might have been able to ex-

make life safer, easier, and more enjoyable.").

⁶² See Tochterman, *supra* note 12, at 1021-25.

⁶³ *People v. Alcala*, 842 P.2d 1192, 1214 (Cal. 1992) (describing rationale behind California approach).

⁶⁴ *People v. Page*, 2 Cal. Rptr. 2d 898, 908 (Ct. App. 1991) (rejecting appellants argument that trial court should have allowed expert to testify regarding unreliable nature of defendant's confession).

⁶⁵ 93 F.3d 1337 (7th Cir. 1996).

⁶⁶ *Id.* at 1339.

⁶⁷ *Id.* at 1340.

⁶⁸ *Id.* at 1339.

⁶⁹ *Id.* at 1341.

⁷⁰ *Id.*

clude it under *Frye*, because maybe this was not something accepted by the community at large. Under *Daubert*, however, the court has to determine whether the conclusion was supported by the scientific method.⁷¹

I also would commend to you *United States v. Cordoba*,⁷² decided by the Ninth Circuit on January 7, 1997. In *Cordoba*, my colleagues held that the rule of the Ninth Circuit excluding all polygraph evidence has been overturned by *Daubert*.⁷³ It used to be that polygraph evidence was excluded under all circumstances.⁷⁴ The defendant in *Cordoba* wanted to introduce polygraph evidence to show his innocence, but the trial court did not allow it. My panel said that though it had been excluded under *Frye*, *Daubert* changes the rule. The *Daubert* test helps defendants whose scientific evidence is derived via the scientific method. The judge is no longer allowed to throw out the evidence merely for lack of general acceptance in the relevant scientific community. Instead, the judge must go through and make a *Daubert* finding, considering all of the relevant factors.

Finally, I too was taken by the *John W.*⁷⁵ case that Judge Tochterman mentioned,⁷⁶ the one involving the penile plethysmograph.⁷⁷ There are about thirty-five cases on LEXIS involving this device. What you find is really interesting. As

⁷¹ See *id.* at 1342-43.

⁷² 104 F.3d 225 (9th Cir. 1997).

⁷³ See *id.* at 228.

⁷⁴ See *Brown v. Darcy*, 783 F.2d 1389, 1395, 1396 n.13 (9th Cir. 1986) (declaring unstipulated polygraph evidence is *per se* inadmissible).

⁷⁵ *People v. John W.*, 229 Cal. Rptr. 783 (Ct. App. 1986).

⁷⁶ Tochterman, *supra* note 12, at 1021-22.

⁷⁷ For those unfamiliar with the penile plethysmograph test, the expert in *John W.* described it as follows:

This is an electronic device that fits over the man's penis. And he wears it while he views slides of naked women of various ages, one through adulthood. Also while he listens to audio tapes. A total of 12 tapes altogether, which vividly describes sexual activity either with an adult or with a child. And there's [sic] various tapes. In some tapes the child's sexuality is obviously forced. And in others the child is ostensibly [sic] consenting, as the child doesn't struggle. And the device measures any changes in the blood flow to the penis, or erection. It can measure erections in percentages, one hundredth of an erection all the way up to a hundred percent of an erection. So it is a physiological measurement of arousal, of sexual arousal, specifically.

John W., 229 Cal. Rptr. at 784.

Judge Tochterman reported, the evidence was excluded in *John W.* and Judge Tochterman speculated that the case would come out the same way under *Daubert* because no evidence was presented that this was derived via scientific method. I am not at all sure that this is the case. Dr. Walker, the expert in *John W.*, testified that he had in fact done a study involving pedophiles at Atascadero.⁷⁸ He had found the plethysmograph to be a reliable means of diagnosing whether somebody is a pedophile.⁷⁹ The methodologies used by Dr. Walker sound very much like the kind of thing *Daubert* would find acceptable. He had a bunch of people. He divided them into a test group and a control group, and he found that the "results obtained at Atascadero State Hospital and other treatment centers show that eighty percent of convicted sex offenders tested showed a positive response to the deviant stimuli for which they were convicted."⁸⁰ I do not see at all why that would be excluded under *Daubert*. But there was another fact that, under *Daubert*, might make the case come out the same: Dr. Walker found that some of the convicts did not react either to the pictures of young boys or to the pictures of women. They had no reaction at all.⁸¹ Suppose our defendant is one of those guys. It seems to me that under *Daubert* this testimony would not have been relevant as to him. It would not "fit." It would be different if he had said that whenever they put a naked woman up on the screen, there was an increase in the blood flow; but when they put up a young boy, the blood flow decreased. That, it seems to me, would have been a "fit."

Let me add one more note of caution. There are two cases out there involving the plethysmograph, both of them in the State of Georgia, where the prosecution offered evidence that they put the plethysmograph on the defendant and he reacted to the young boys and did not react to pictures of women. Therefore, the prosecution argued, he is a pedophile, and he more likely than not committed the crime charged. The first case was *Gentry v. State*.⁸² In that case, the Georgia Court of

⁷⁸ *Id.* at 785.

⁷⁹ *Id.* at 784.

⁸⁰ *Id.* at 785.

⁸¹ *Id.*

⁸² 443 S.E.2d 667 (Ga. Ct. App. 1994). In *Gentry*, the "results of the plethysmograph

Appeals threw out the conviction under essentially a *Frye* standard.⁸³ We have to ask ourselves, would they have admitted it under *Daubert*? It seems to me, once you start admitting that kind of stuff for the defense, you are going to have to admit it for the prosecution as well. In the second case, *Tuttle v. State*,⁸⁴ there was no objection to the plethysmograph results.⁸⁵ The appellate court let the conviction stand because the defendant failed to object.⁸⁶ Thus, at least one person is in jail convicted, in part, by the plethysmograph.

Now, I would like to comment briefly on the Dutch judgment presented by Judge Nijboer.⁸⁷ I was actually quite taken with it. I like the idea of having experts who are not dependent on parties. But let me throw out a couple notes of caution.

There is something about the way we make decisions that favors a decisionmaking process that is reviewable and public. Under the Dutch system, when the experts come together and determine whether *X* is the scientific fact, Judge Nijboer tells us that they agree almost all of the time. They try to reach an agreement on every case. No one, no trial judge, no appellate judge, is then in a position to dispute their findings. Essentially, the decision is made by the experts in secret. The experts, in a way, become the judges. That worries me. I do not know enough about the Dutch system to say much more than that.

I am also a little bit concerned about the one sentence in Judge Nijboer's mock opinion that says: "If causation could be proven, [the drug company] should be held liable for the damages."⁸⁸ Yet later on, in Part 5 of the opinion, the Court recognizes that this was not something that was either known or

were used to support the conclusions of a witness that the defendant was not forthcoming in psychological examinations about his sexuality and that he was not normally aroused by adult women." *Id.* at 669.

⁸³ The court stated that "[g]iven the rejection of penile plethysmograph evidence by other states, and particularly the uncertainty within the scientific community of its reliability, we hold that it is inadmissible in Georgia." *Id.* Finding admission of the evidence not to be harmless, the court reversed the conviction. *Id.*

⁸⁴ 450 S.E.2d 863 (Ga. Ct. App. 1994).

⁸⁵ In *Tuttle*, the defendant failed to object during sentencing to the trial court's consideration of a report based in large part upon plethysmograph testing. *Id.* at 864.

⁸⁶ *Id.*

⁸⁷ Petra van Kampen & Hans Nijboer, *Daubert in the Lowlands*, 30 U.C. DAVIS L. REV. 951, 990 (1997).

⁸⁸ *Id.* at 993.

could have been foreseen.⁸⁹ Nobody knew this. Let me just ask, why would there be liability if the drug company has obtained approvals from administrative agencies, and has suffered the burdens and costs of testing the drugs? They have gone through all the requirements of the law and at the time there is nothing out there, according to the judgment, that suggests a basis for suspecting there is a relationship between the drug and birth defects. Why would the drug company be liable? Why do we not say it is a misfortune? It is one of those misfortunes that is part of life, just like lightning, just like birth defects themselves. We should not deprive those other women and their babies of a potentially useful drug because something unfortunate happens.

⁸⁹ *See id.* at 994-95.