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The Jury and Scientific Evidence

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JUDGE PRICE: Our next two speakers are going to shift focus just a little bit to look at the relationship between the scientific questioning and testing of evidence upon the rights of juries in making determinations in liability cases.

First is Richard O. Lempert, Professor of Law and Sociology at the University of Michigan, an expert on the role of the jury in decision making. Professor Lempert.

PROFESSOR RICHARD O. LEMPERT: Read court decisions and commentaries from 100, or even five years ago, and you will find that experts and scientific evidence were causing problems then just as they are causing problems now. I do not think that *Daubert, Kumho Tire*, or any change in a rule of evidence will keep expert scientific testimony from being a difficult area for the legal system. Yet we must still ask: "What are the best terms on which to deal with scientific experts, and how can we improve the system?"

The first point I want to make is that there is no scientific evidence exception to the Sixth or Seventh Amendments of the Federal Constitution or to their equivalents in state constitutions. It is, however, an interesting question whether the courts, led by the Supreme Court, are carving out such an exception under the guise of giving judges expanded, largely unreviewable authority to rule on the admissibility of expert testimony under Rule 702 of the Federal Rules of Evidence and its state equivalents.

I did not think *Daubert* was a threat in this way, nor did I think that *Joiner* was a threat in this way, but I think that *Kumho Tire* may well be. The difference between them is that in both *Daubert* and *Joiner*, if the evidence had been allowed in, as it often was in the Bendectin litigation that gave rise to *Daubert*, and had the jury decided for the plaintiff based on the expert testimony, an appellate court would have been correct in overturning that verdict, as a trial judge would have been in granting judgment NOV.[48] The scientific evidence in these cases was sufficiently sketchy or unreliable that under no fair interpretation was it sufficient to support a plaintiff's jury verdict.

I will not say much about *Kumho Tire* because a session is devoted to it. But at least as I read *Kumho Tire*, the Court's decision poses threats to the Seventh Amendment's right to a jury trial in civil cases that *Daubert* and *Joiner* do not pose. In *Kumho Tire*, had the evidence been allowed in and had there been a jury verdict in favor of the plaintiff, I do not think either a reversal on appeal or a judgment NOV would have been proper. Indeed, the Supreme Court almost says as much when it talks about the broad discretion that Rule 702, as interpreted by *Daubert* and *Joiner*, gives the trial judge.[49] The implication is that, had

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the judge admitted the scientific evidence, that would have been okay too. This means that a jury verdict might legitimately have rested, at least in part, on the evidence excluded in *Kumho Tire*. So, on the guise of passing on a Rule 702 preliminary factual question, which requires only a preponderance of the evidence, trial judges are given an almost unreviewable discretion to prevent juries from hearing cases that the Seventh Amendment contemplates them hearing.

Yet courts all the time decide preliminary fact questions and keep evidence from the jury. This is not seen as having Seventh Amendment implications. It is fair to ask how *Kumho* is different. First, the question the court is deciding is the very one the jury will be called upon to evaluate. How probative is the scientific evidence. If the question was, for example, one of hearsay or privilege, the question the judge decides (Was the declarant excited? Was the declarant consulting a lawyer?) is not the question the jury will decide if it hears the evidence. Second, although it may be that the rejection by the court of a hearsay statement or a privileged disclosure may result in a directed verdict, this is not a likely outcome. In products liability, toxic tort cases and similar litigation, rejecting a plaintiff's scientific evidence commonly entitles the defendant to a directed verdict. Thus the question of whether scientific evidence is reliable is a little like the question whether a purported original copy of a contract is a forgery in applying the Best Evidence Rule. If the judge determines the evidence is inadmissible because it does not qualify under the rule, the plaintiff will no longer have a case. (Giving the judge too much discretion threatens the plaintiff's Seventh Amendment right to a jury trial.)

The Federal Rules of Evidence, following common law practice, avoid this problem by changing the usual standard under which preliminary evidentiary questions are decided. To avoid Seventh Amendment problems the standard the judge should apply in determining the preliminary question when the admissibility of expert testimony under Rule 702 is an issue, should be the same as it is under the Best Evidence Rule: Whether a reasonable jury could credit the offered evidence. *Daubert* and *Joiner* are not troublesome because it appears in both cases that a reasonable jury could not have found for the plaintiff based on the expert's testimony.[50] *Kumho Tire* is troublesome because it appears a reasonable jury could have found for the plaintiff based on the plaintiff's tire expert testimony.[51] But because the trial judge believed it more likely than not that the evidence was not reliable, the jury never got a chance to make a reasonable finding that differed from the judge's views. Yet it is the right to such jury judgments that the Seventh Amendment protects. If it only protected the right to jury trial when juries agreed with judges, we would not need it.

Perhaps the Court never thought through the implications of the discretion it gave trial judges because the *standard for decision issue* was not the core issue in the case. The issue that the court granted *certiorari* to resolve was whether trial judges should play the same "gatekeeper" role when expert evidence was largely experientially based, as when it was more traditionally scientific. Here, I think the Court got it right. At least so long as the expert's field is one requiring technical knowledge of a type that might be validated by science (compare a tire expert with, for example, an expert on fly fishing), the judge's role should be the same.

What I want to spend most of my time on, however, is not the law as it relates to cases the Supreme Court and other courts are handing down, but rather, on the use of the juries to deal with scientific evidence. Although there is no scientific evidence exception to the Seventh Amendment,

we can always ask whether there should be. Rather than deplore the Supreme Court for using, in *Kumho Tire,* an evidence rule to get around a constitutional provision, maybe we should applaud the Court for working to provide a more rational system of dealing with scientific evidence.[52]

Is taking cases from juries based on judicial judgments of the quality of the scientific evidence the right way to proceed? This is not always an easy question to answer, but so long as a reasonable jury might accept or reject the scientific evidence I believe we should trust juries with scientific evidence. First, juries are not necessarily poorly equipped to deal with scientific evidence. One often hears this said, but repetition does not make it true. Some jurors are poorly equipped to deal with scientific evidence; they lack the general knowledge, and perhaps even the intelligence to understand what scientific experts are saying. However, research suggests that juries can identify those members best equipped to follow the evidence, and they take their lead from these persons. Someone who understands the field the expert is talking about is likely to be very influential in the jury discussion.

A challenge for judges who seek to sit competent juries in scientifically complex cases is to ensure that knowledgeable people are not allowed to exclude themselves from juries and are not excluded by the lawyers. The latter may be impossible given the availability of peremptory challenges. I cannot, however, help but wish that some trial judge somewhere would say to a lawyer she saw systematically trying to exclude the best educated jurors or the ones who knew the most about the topic: "Counsel you have the right to do that with your peremptory challenges, but in every ruling I make in this case, I am going to bear in mind that one of the parties in this case wants a jury that does not understand the evidence." No doubt, this would get a judge in trouble, but peremptory challenges are needed because they allow excuses for possible biases that will not justify challenges for cause; they are not intended as tools to dumb down juries.

One reason why juries are not necessarily well equipped to deal with scientific evidence, is that few people are. Scientific evidence can be difficult to understand even when it is clearly presented. And when it is not clearly presented, or when expert testimony conflicts, it is likely to be very confusing. It can be difficult, not just for a jury to handle, but also for the judges and the attorneys. Indeed, it can be difficult for scientists themselves to agree on what to make of certain facts. You can, and often do, have scientists who disagree even though each has excellent credentials, neither is simply a hired gun, and both use legitimate analytic techniques. If you push scientists in these circumstances, they may admit there are things they do not understand or that research that has not been done is needed to resolve the dispute between them. Honest differences, usually played out in the pages of reputable scientific journals, are being brought into the courtroom.

Matters do not have to have reached this stage for scientific evidence to pose problems for juries. Yet, before we get rid of juries (and substitute judges who may be just as confused), we should attempt to help juries better understand the evidence they are hearing. Several approaches hold promise.

First, we can make better use of court-appointed experts. If all a court-appointed expert does is come to court and give another opinion -- thus providing the jury with an opinion of someone hired by the plaintiff, an opinion of someone hired by the defense, and an opinion by someone hired by the court -- there is little reason to believe a jury will better understand the science involved. This

does not mean its decision will not be affected and even eased by the appointed expert's testimony. Jurors do not have to be very bright to figure out which expert is unbiased and what the court expects them to do. However, even if there is not financial bias, court-appointed experts may have other professional or related biases. Moreover, court-appointed experts may not have all the information or resources that party experts have been able to acquire. These factors limit the value of appointing experts to express opinions on the ultimate issues in cases. But this is not the only way a court-appointed expert can be used.

An expert can be appointed to work with the parties' experts to simplify issues, to establish procedures for analyzing data, to specify areas of agreement, to dispose of scientifically untenable arguments or approaches that might obscure the true facts and to form case presentation strategies that will allow the parties' experts to make their differences and the factual assumption on which these differences turn, clearer for a jury. An expert might even be called on to help the jury directly. Such an expert could educate the jury about the field in question and describe the kinds of issues experts in it confront and the validity of different procedures. A court appointed statistical expert might, for example, without analyzing the data that figure in a case, explain the logic of regression analysis to the jury as well as what significance tests do and what it means for a measure to be valid. A court-appointed expert might also be allowed to answer juror questions about expert testimony after the opposing experts have testified at the close of the evidence or perhaps even during jury deliberations.

Other strategies for aiding juries faced with scientific evidence are now being tried in some jurisdictions, although they are not necessarily limited to issues relating to science. One is to provide juries with transcripts if a trial is producing daily transcripts, or to allow jurors to take notes (the jury is still out on this reform because people can lose sight of what is going on when they are busy trying to write down what has just been said). Jurors are also, in some courts, allowed to ask questions during the trial. Even when questions are not put to witnesses because they seek impermissible evidence, the questions give lawyers an idea of what concerns a juror or what the jury is confused about. The lawyers can then offer admissible evidence designed to address a juror's concern or alleviate jury confusion.

A third strategy that may help is allowing interim discussions or deliberations in lengthy cases. We will know more about the wisdom of this innovation when the results of two studies in Arizona, which experimentally varied permission for interim discussions, are published.

Perhaps the most important potential reform applies to all cases, not just to cases involving scientific evidence. Early and still salient research on this topic was done by one of my co-speakers, Bob Charrow, and his wife, Veda, some years ago. Bob and Veda showed that many jurors had trouble understanding even relatively commonplace instructions.[53] They also showed that there are techniques available to make instructions much more comprehensible. Other scholars, like Bruce Salses and his colleagues, have written manuals explaining how more comprehensible jury instructions might be written.[54] This reform would probably do more for achieving just results in cases that turn on scientific evidence than reforms that increase the clarity of scientific evidence.

If jurors do not decide issues of scientific evidence, judges, as in *Kumho Tire*, will. It is fair to ask whether this is a good thing or a bad thing. In one respect I think it is unequivocally bad, and

this is the principal reason why I oppose transferring the responsibility for deciding scientific questions from the jury to the judge. Even though juries are sometimes confused about the import of scientific evidence, giving the authority to decide scientific evidence issues to judges may substantially change the political process of appointing or electing judges, particularly at the trial level. Potential parties before courts, especially repeat players such as a state's "trial lawyers" group, litigants like Exxon or groups of litigants will have much more at stake than they have today in the election or selection of judges to our nation's trial bench. I think putting the kind of money and stake in the trial judge selection system that will likely follow if judges are allowed to resolve most disputed questions of scientific fact is a serious mistake. Juries should be valued for the protection they give the system, by reducing (although by no means eliminating) the stakes that wealthy repeat litigants have in who sits on our nation's trial benches.

Beyond this, there is the question whether judges or juries will be the better fact-finders in cases involving scientific evidence. Each decision maker has its strengths and weaknesses. Judges are usually well-educated people. Judges can study up on problems posed by scientific evidence. They can consult books, treatises, journals and the like. Indeed, I know some judges who have consulted experts on their own, given them a phone call or met with them and asked what a confusing bit of scientific evidence meant. They have that capacity to educate themselves. Judges also have to go through the discipline of writing opinions when, for example, they exclude scientific evidence and for this reason give directed verdicts. This can be helpful. In *Kumho Tire*, the trial judge went through that discipline and at a rehearing said, in effect, "What I wrote the first time doesn't make sense," and gave a different opinion, albeit one with the same result.[55] This, of course, is the dark underbelly of opinion writing. It may be that the judge's preferred outcome drives the way her opinion evaluates scientific evidence rather than that her evaluation of the scientific evidence drives the opinion.

One of the readings we were provided with, listed a host of cases in which *Daubert* was applied to keep out scientific evidence, often evidence that seemed like so-called "junk science." The summaries make the cases they report on look like wise decisions, and one reads them glad that *Daubert* exists to allow the exclusion of the evidence. The only problem with this reaction is that the decisions on which the summaries are based reflect what the trial judges said the evidence said, which may not be a fair reading of the evidence. For example, when I first read the trial judge's decision in *Kumho Tire* and the Court of Appeals' decision that reversed the trial judge, I thought that this was a "junk science" case, and it had been correctly decided. But after reading the briefs from both sides, looking for what seemed to be the likely facts, I began to think that the plaintiff's evidence in *Kumho Tire* was not "junk science" at all. It turns out that the methods used by the plaintiff's expert were the same as those used by the defendant's expert; they just reached different conclusions.[56]

Another advantage judges have over juries is that they have clerks and can appoint special masters. These people may have case-specific expertise. In one noted case that turned on statistical evidence Judge Patrick Higginbotham, now on the Fifth Circuit, but then a Federal District Judge in Texas, appointed a clerk with expertise in statistics to help him with the opinion. I heard him once say that they took a year in writing the opinion. Juries cannot appoint clerks or take a year to get

things right.

But juries also have their advantages. Juries may have members who know a technical area well or have general mathematical or scientific knowledge that judges seldom possess. Moreover, as I have noted, some research suggests that jurors can recognize which of their members are most knowledgeable and will follow their lead.

The jury also has the advantage of a discussion in which there are many different points of view. Their different values and biases can clash and cancel out. The more difficult evidence is to understand, the greater the likely role of a decision maker's preferences. If scientific evidence is hard for the judges and juries to comprehend, a decision making body that combines different opinions may be some protection against decisions that are based more on biases than on a serious attempt to understand the evidence. Also, parties may make a greater effort to educate jurors than judges because they see jurors as knowing less than judges do.

Finally, judges and jurors can both make mistakes, and they both do make them. Juries have an advantage here because when they make mistakes, their errors can be corrected by judges. Judges mistakes, however, are less likely to be corrected. To return to *Kumho Tire*, one result of the Supreme Court's endorsement in *Kumho Tire* of *Joiner*'s broad grant of trial judge discretion is that we now have a jurisprudence, endorsed by the Supreme Court, which says that when trial judges make mistakes in dealing with the admissibility of scientific evidence, except in the most exceptional cases, the mistakes *shall* go uncorrected, even though the case turns on them.[57] This opinion which goes further than any other decision in allowing cases involving scientific evidence to be taken from juries is perhaps the best reason why courts should hesitate to do this. The judicial system's capacity to correct its own errors has long been an important element of due process. After *Kumho Tire*, erring on the side of excluding scientific evidence and taking cases from juries limits this capacity substantially, while erring on the side of inclusion and giving cases to juries in the first instance does not.

Thank you.