THE PHILIP D. REED LECTURE SERIES

ADVISORY COMMITTEE ON EVIDENCE RULES

CONFERENCE ON BEST PRACTICES FOR MANAGING *DAUBERT* QUESTIONS*

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* This conference was held on October 25, 2019, at Vanderbilt Law School under the sponsorship of the Judicial Conference Advisory Committee on Evidence Rules. The transcript has been lightly edited. It represents the panelists' individual views only and in no way reflects those of their affiliated firms, organizations, law schools, or the judiciary.

PANELISTS
Hon. Vince Chhabria
Hon. John Z. Lee
Hon. William H. Orrick, III
Hon. Edmund A. Sargus, Jr.
Hon. Sarah S. Vance
Professor Edward K. Cheng

DEAN CHRISTOPHER GUTHRIE: My name is Chris Guthrie, and I am the Dean of Vanderbilt Law School. On behalf of my colleagues, I'm delighted to welcome you to Nashville, to Vanderbilt University, and Vanderbilt Law School. We are thrilled to host you and support your very important work. For making today's event possible, I would like to recognize your Chair, Judge and Professor Debra Livingston, and Professor Dan Capra, who suggested that you hold your meeting here at Vanderbilt. Your work reflects many institutional values that we hold dear at Vanderbilt Law School.

First, we like you, reject the purported divide between a legal academy and law practice observed and bemoaned by prominent American jurists like Judges Harry Edwards and Richard Posner. Elite academics like those in this room understand that their scholarship and teaching are enriched by practice and by the insights of practitioners. Elite lawyers and judges like those in this room appreciate that their day-to-day work benefits from insights gleaned from the academy. Law, in short, is a scholarly discipline and a professional vocation, and the best lawyers, teachers, and scholars embrace and embody both the scholarly and the practical.

Second, your work is consistent with our commitment as a school to law in action. We certainly care deeply about legal theory as theory and we recognize that scholarship can be an end in and of itself. But as a faculty here, we are more oriented toward legal scholarship that has real-world impact. Impact on scholarship, of course, but also on lawyers and law practice, judges and judicial decision-making, regulators and regulations, and policymakers and the policies they promulgate.

Third, your work today on scientific evidence is consistent with our institutional commitment to engage with other disciplines. Most of our faculty have meaningful disciplinary training outside of law including doctrinal training in multiple fields. Our faculty holds secondary appointments in many schools and departments on campus including biology, chemistry, economics, history, management, medicine, political science, psychiatry, radiology, and sociology, and we are home to a unique PhD program in law and economics, as well as a law and neuroscience program funded by the MacArthur Foundation. As a school, we therefore believe we are a logical host for you and your work, and we are thrilled that you are here with us. And speaking personally, I'm particularly pleased to have you here at this moment in time because you are devoting yourselves to factfinding and truth-seeking. Regrettably, we live in an era in which facts

are often treated like opinions and every side seems to have its own preferred truth. This means that your work is more important now than ever. So, thank you very much.

JUDGE LIVINGSTON: I want to thank the Dean for his really warm and welcome remarks. I'm Debra Livingston, Chair of the Advisory Committee on Evidence Rules, and Dan Capra, the Reporter to the Committee, has asked me to just say a few words before we kick off the symposium. Welcome to our judges and our guest professor today. We've been wrestling with Federal Rule of Evidence 702[1] for some time now, addressing whether we should recommend to the Standing Committee on Rules of Practice and Procedure to take up a possible amendment to the Rule. We're looking now principally at the proposal to add a provision about overstatement of an expert's conclusion to the Rule. The principal reason for our inquiry, the principal motivating factor when we took it up, was the special concern with forensic feature–comparison evidence. But members of the Standing Committee suggested that while we were engaged in this inquiry, we should take a look at *Daubert*[2] too, as a whole, as it has been over twenty-five years since *Daubert* was decided, and this seemed like an opportune moment.

At the same time that we were looking at a possible amendment, we've also thought from the start that our Committee might play an important role in furthering judicial and legal community education about, specifically, the forensic feature–comparison subject, recognizing from the start that if it was an amendment that would correct this problem or help eliminate this problem, it would require education in the bar. So, we've been in ongoing discussions with the Federal Judicial Center. The Second Circuit has already done a panel on the subject of forensic feature–comparison evidence, and as a result of the good work of the Federal Judicial Center and Dan and Fordham Law School and Duke, I'm apprised that they are in the process of planning for yet another program on the subject in the near future. From the beginning, we've understood that an amendment to Rule 702 would not reach just forensic feature–comparison evidence but would, in all likelihood, if we ultimately came to the decision, need to be a general amendment, so impacting the range of cases. And this is a challenge because the evidence that is considered under Rule 702 really runs the gamut.

We had a number of judges appear before us in the past and we have heard a range of very informed views. It was Judge Jed Rakoff of the Southern District of New York who initially proposed that we might think about a way to regulate an expert's overstating the conclusion that could be supported by the expert's principles and methods.[3] We've had some other judges that expressed some concerns that maybe a limitation on overstatement is already

1. FED. R. EVID. 702 (outlining the requirements an expert witness must meet to be permitted to testify).

2. Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579 (1993).

3. *See, e.g.*, Symposium, *Forensic Expert Testimony,* Daubert, *and Rule 702*, 86 FORDHAM L. REV. 1463, 1494–96 (2018).

built into the Rule and it would complicate the application of *Daubert* to add such a requirement to the Rule.[4]

So, we decided that we should have a judge- and professor-only panel and really try to ask people who have been using *Daubert* as judges how this result might affect their work and how we should think about it going forward. We are also hoping today that we are going to hear a lot about best practices and that we can take some of the ideas expressed today and introduce them to the Federal Judicial Center to talk about the application of Rule 702 more broadly across the gamut of scientific and experiential technical evidence.

So, I'm going to turn it over to Dan. I would encourage to all of the Advisory Committee members to intervene with questions. Dan and I have worked on preparing some questions, and he is going to play the role of moderator.

PROFESSOR CAPRA: Judge Livingston thought about this panel as a best practices panel, and so I was tasked with finding judges throughout the country who had just written impressive *Daubert* opinions and have had a lot of experience in dealing with *Daubert* issues. I found five of the very best, so let me introduce them quickly: Judge Vince Chhabria from the Northern District of California, Judge John Z. Lee from the Northern District of Illinois, Judge William Orrick from the Northern District of California, Judge Edmund Sargus from the Southern District of Ohio, and Judge Sarah Vance from the Eastern District of Louisiana. Each of them has wrestled with some very complicated *Daubert* issues and has come out on top in my view, so I think they are good people to tell us about what the challenges of *Daubert* are.

And then we are very happy to have Professor Ed Cheng from Vanderbilt Law School here as a commentator. He is the foremost scholar on expert evidence in the United States, so we are very happy to have him here and thank him for helping me put this together. I want to spend one minute to provide background for today's discussion, for people who might be unfamiliar with the topic.

Today we will be talking about *Daubert v. Merrell Dow Pharmaceuticals*,[5] a 1993 opinion which established a gatekeeper function under which courts must find by a preponderance of the evidence that the expert's methodology is reliable.[6]

The Supreme Court set forth the famous *Daubert* factors, which we might talk about today a little bit: testability, peer review, existence of standards and controls, assessment of rate of error, and general acceptance of the methodology.[7] One of the things I want to talk about today is that one of the problems right out of the gate is that the Court in *Daubert* provides

4. *See, e.g.*, Symposium, *Conference on Proposed Amendments: Experts, the Rule of Completeness, and Sequestration of Witnesses*, 87 FORDHAM L. REV. 1361, 1376–77 (2019).

5. 509 U.S. 579 (1993).

6. *Id.* at 592–93.

7. *Id.* at 592–95.

inconsistent messages. On the one hand, the Court instructs that trial judges must be serious about scrutinizing the reliability of an expert's methodology.[8] The gatekeeper cannot admit the evidence unless it finds the methodology reliable by a preponderance of the evidence[9]—because if the gatekeeper does not scrutinize it closely, unreliable expert testimony will be put before jurors, who won't be able to understand just why it is unreliable. But on the other hand, the *Daubert* Court says that cross-examination and argument, not exclusion by the trial judge, are the preferred ways to deal with "shaky but admissible evidence," whatever that means.[10] So, *Daubert* is a schizophrenic opinion and a lot of post-*Daubert* cases provide the same mixed signals, stating for example that "the proponent has the burden of proving the reliability of the expert's testimony"[11] but also saying that the presumption is in favor of admissibility of expert testimony, which to me seems inconsistent.

Then *General Electric Co. v. Joiner*[12] emphasized that trial courts have significant discretion in the gatekeeper review.[13] It also clarified that the gatekeeper review is not only about methodology because if there is a gap between the methodology and the conclusion, then that is something that the judge should be concerned about.[14] Next, *Kumho Tire v. Carmichael*[15] established that the gatekeeper function applies to nonscientific experts as well, recognizing, though, that applying the *Daubert* factors such as peer review to nonscientific experts becomes difficult, and some have held that *Daubert* is not strictly applicable in that situation.[16] The bottom line from the trilogy is that the trial court must ensure that the expert is using the same degree of intellectual rigor in reaching the in-court opinion as you would expect them to use in their job outside of court.[17] And then this Committee joined the party in 2000 by amending Rule 702,[18] and it was designed to simplify the *Daubert* trilogy and the hundreds of cases that applied it. And the Committee set forth three reliability-based requirements to be met by a preponderance—sufficient facts or data, reliable methodology, reliably applied.[19] And there's a giant Committee note which has been referred to

8. *Id.*
9. *See id.* at 592 n.10.
10. *Id.* at 596.
11. *See, e.g.*, Moore v. Ashland Chem. Inc., 151 F.3d 269, 276 (5th Cir. 1998) ("Thus, the party seeking to have the district court admit expert testimony must demonstrate that the expert's findings and conclusions are based on the scientific method, and, therefore, are reliable. This requires some objective, independent validation of the expert's methodology.").
12. 522 U.S. 136 (1997).
13. *See id.* at 142–43.
14. *See id.* at 146.
15. 526 U.S. 137 (1999).
16. *See id.* at 141–42, 151.
17. *Id.* at 152 ("[A]n expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field.").
18. *See* FED. R. EVID. 702 advisory committee's note to 2000 amendment.
19. *See id.* r. 702 (describing the requirements an expert witness must meet to be allowed to testify).

very often by courts in navigating *Daubert* issues.[20] Given that landscape, let's proceed with the panel discussion.

I. TOPIC ONE: HANDLING MULTIPLE *DAUBERT* MOTIONS AND OVERSTATEMENTS IN COMPLEX SCIENTIFIC CASES

PROFESSOR CAPRA: Judges, what happens when you have a complex scientific case and your clerk comes to you and says there are eight *Daubert* motions? The reason that there are eight is because there are eight experts and it seems that today all of the experts in complex cases get challenged under *Daubert*. My sense is that in the early days after *Daubert*, it was mostly plaintiffs' experts that were subject to *Daubert* motions, but now it's everybody, and so where do you go? What do you do? The late Judge McLaughlin said to me once: "Under *Frye*,[21] I could always count, I was a very good counter. But now I've got to learn biology. Last time I took biology was in high school and I hated it so much I became a lawyer. So now I have to become a biologist again." Do you evaluate scientists when you are not a scientist? We'll just start there.

JUDGE VANCE: I will take a crack at it. The first thing I want to understand is what the area of expertise is, what the expert can prove, and how they got there. I look at the *Daubert* factors, but I also try to figure out what an expert in this field is supposed to do. And a lot of times I rely on the Federal Judicial Center Reference Manual on Scientific Evidence.[22] For example, there is a really good section on epidemiology that describes the epidemiological process and gives you a sense of what someone who's doing it right would do.[23] And then I look for what I would call red flags that would tip you off if this is not being done properly, and sometimes you can find that in case law that has critiqued similar types of studies or similar types of work. But you really have to get an understanding of the science yourself, not only through the reading of briefs but also whatever external sources you can get your hands on. Some judges use "science days" to get a tutorial from the parties on the applicable science.[24] But what I try to do is understand the expertise involved and what they are supposed to be doing, what a good analysis would look like, and then look at what I've got and see what the expert did.

JUDGE LEE: If a clerk comes to me and says there are eight *Daubert* motions, one of the first things we create is a spreadsheet chart and one of

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20. *Id.* r. 702 advisory committee's note to 2000 amendment.

21. *See* Frye v. United States, 293 F. 1013, 1014 (D.C. Cir. 1923) (establishing the general acceptance test for the admission of scientific evidence).

22. *See generally* FED. JUDICIAL CTR., REFERENCE MANUAL ON SCIENTIFIC EVIDENCE (3d ed. 2011), https://www.fjc.gov/sites/default/files/2015/SciMan3D01.pdf [https://perma.cc/76Z4-GPCP].

23. *See generally* Michael D. Green et al., *Reference Guide on Epidemiology*, *in* REFERENCE MANUAL ON SCIENTIFIC EVIDENCE, *supra* note 22, at 549.

24. *See generally* MELISSA J. WHITNEY, FED. JUDICIAL CTR., TUTORIALS ON SCIENCE AND TECHNOLOGY (2018), https://www.fjc.gov/sites/default/files/materials/02/Tutorials_Science_Technology_2018.pdf [https://perma.cc/48T2-N4JL].

the first things I want to determine is, "Do you have the qualifications?" How do the qualifications overlap with the issues in the case? Sometimes there are issues and opinions that are relevant to the case and come within the witness's qualifications. A lot of times it is more like a Venn diagram. There are certain opinions that the expert is rendering that actually do fit his or her particular niche and qualifications. But then, to try to deal with some of the particularities of the case, sometimes they stray beyond those central opinions. So one of the first things I try to do is try to ferret out, based on the expert report, which are the opinions that are within the expert's particular realm of expertise and which are the opinions that I think they are straining to reach to deal with the particularities of the case. And then once I ask that the former be highlighted in yellow, the latter in green, and then the latter ones are the ones that I really start focusing on first.

PROFESSOR CAPRA: I have to ask you a question about that. I think the standard for basic qualification of an expert—those you would highlight in yellow—is pretty mild. But courts are strict in limiting the expert to their area of expertise. Would you agree, Judge Lee?

JUDGE LEE: I think so. I had a recent criminal case where the defendant was accused of violating tax laws.[25] She was part of the "sovereign citizen" movement.[26] I won't go into what the movement is—I'm sure a lot of you know—but in the end she submitted fraudulent estate tax information, and her defense was, "I was part of this group, this cult, and I was brainwashed into doing it. I didn't have the sufficient criminal intent."[27] And so her attorney offered, as an expert, a psychologist who was a general psychologist but didn't really have much expertise in cults.[28] He had some experience with group dynamics—not really cults—but he did a lot of research on cults and then decided that the group fit all definitions of a cult.[29] And so, then the question became, as you said, how do those particular opinions fall within his expertise, or do they not? And I found that his opinions were outside of his expertise.[30]

PROFESSOR CAPRA: Thanks, Judge Lee. Another question that I see frequently arising at a *Daubert* hearing is that one side will argue that the other expert has missed something when in fact they haven't. So the party is cherry-picking the other side's arguments. How do you deal with that kind of issue? For example, the defendants say that the plaintiff's expert didn't read this report, but if you look to the plaintiff's expert, she actually states

25. *See generally* Order, United States v. Truitt, No. 14 CR 718 (N.D. Ill. Oct. 13, 2017), ECF No. 98 (excluding an expert's testimony under Rule 702 and *Daubert*).

26. United States v. Truitt, 938 F.3d 885, 887 (7th Cir. 2019) (The defendant was a member of the Moorish Science Temple of America, "which views itself as a sovereign 'ecclesiastical government' . . . [and] teaches that neither the states nor the federal government have any authority over its members.").

27. *See id.* at 886.

28. *See id.* at 888–89.

29. *See id.*

30. *See* Order, *supra* note 25.

that she has read the report. So what do you do when one side—often both sides—misrepresents that adversary expert's opinion?

JUDGE ORRICK: You can figure all that out from the papers. That's not very hard to do. In answer to your first question, if a law clerk comes to me with eight *Daubert* motions, I say well, you've got a lot of work to do. [Laughter]

As to the question of how to get up to speed on the science, I don't know how much I'm going to have to know in any of these cases and I probably won't be able to figure out the entire science. So, I look to where the parties are—what the points are that the parties are arguing about and I work backwards from there and figure out, okay, so what makes sense about this? Where is the disagreement? Why is there disagreement here? If I have to go as far as Sarah goes, to the Manual on Scientific Evidence,[31] for instance, then I'm usually in trouble.

JUDGE VANCE: Can I add something to this? If I have expert motions, what I'll do is look at them and figure out if one of them is stacked on the other. And if one of them is going to make the rest of them go away, I'll focus on that one first and decide that one. Then the rest of them will fall if the first one does.

PROFESSOR CAPRA: Like the "me too" experts—the ones who basically say, "I agree with everything Expert 1 says."

JUDGE VANCE: Yes. And another example is that if you don't have general causation, you can't have specific. So you deal with the general causation first and figure out where the bodies are buried in that. And Judge Orrick is right. You have to figure out what the fight is about. But it helps, once you know that, to look at the field and figure out what they do to ferret that issue out.

JUDGE SCHROEDER: How often will you hold a hearing on a *Daubert* motion and do they help?

JUDGE VANCE: A lot of times I do it on the briefs. But if I get briefs, I get the report. I'll ask them for the studies. I'm not shy about asking them to give me more information. And if I think I need a hearing after that—it's infrequent that I have live hearings, but when I have them, it is pretty intense—I will let them know in advance what is on my mind so that they can focus. But when you have a hearing, what happens is that you've already got the briefs, and then they come in with extra affidavits tailored to the hearing, so it is even more material to read. But the hearings can be helpful, I have to say that. If you get to the point where you really need to hear it yourself, you can then ask questions yourself and that helps cut through the adversarial positions and you can try to corner the expert to tell you exactly what you want to know.

JUDGE LIVINGSTON: What causes you to decide you need a *Daubert* hearing? Is it usually that the science is too difficult? You really need to ask

31. *See generally* FED. JUDICIAL CTR., *supra* note 22.

some questions? You just need more than the papers can give you? Why would a hearing be a bad thing in that instance?

JUDGE VANCE: I don't think the hearing is a bad thing. What I was referring to is that you get more papers right on top of the hearing to review, maybe more studies, supplemental reports, that sort of thing. I think what I find helpful in hearings is that sometimes you can tell where there is a "fudge factor" on one side or the other and if you ask the questions, you can get somebody to make a concession.

PROFESSOR CAPRA: So, about asking questions—do you tell them in advance what the questions are going to be at a hearing?

JUDGE VANCE: Sometimes I do that and sometimes I don't. But it helps if you can get them focused. I find that if you think an expert is fudging about something, you can push on them to see if they will give in and concede that there is more in common with the other expert than would meet the eye from just reading their papers. Because the lawyers prepare the papers. A lot of what you see from the experts is written by the lawyers, having been one myself. The lawyers may give the expert a list and ask, "Can you say this, this, this, this, and that?" If he says yes, you hire him. With that in mind, if you have the expert and you can ask the questions yourself, you may get a more unvarnished answer than you would get if it is filtered through the lawyer.

JUDGE CHHABRIA: Yes, and let me just support what Sarah said about that. First of all, on the issue of hearings—I think in the large majority of *Daubert* motions, we don't have hearings because, number one, a lot of times the *Daubert* motions aren't particularly important to the summary judgment motion that we are deciding. So, a lot of times we will just say that we won't even rule on them because we can decide the summary judgment question without them. Then there are some that of course we need to consider, but it is just not that difficult. I think we would all probably agree that in those cases where there is a science question that is complicated and central to the outcome of the case, we are going to have hearings, and we are probably going to have really long hearings.

And I do think, as Sarah said, it is very important for the judge to be actively involved in the questioning; interrupt the lawyer's cross-examination; interrupt the lawyer's direct examination; take their own period after the cross is done and have a session with the expert because they will be more candid with the judge, certainly more than with the opposing side. They don't want to concede anything to the opposing side. Be transparent, I guess, about two things. One is to be transparent about what you are concerned with so that the expert has a chance to address it. The second thing that I think is important to be transparent about—your initial question was how do you make yourself a scientist? What I try to do is be very transparent that I don't have any illusions about making myself a scientist.

PROFESSOR CAPRA: You say that you don't know?

JUDGE CHHABRIA: What I say is that I went to UC Santa Cruz and the only science class I took was Physics for Poets and you need to know that so

that you tell your experts who you are dealing with and that your experts should be prepared to start from scratch. I think it is very important to be very transparent about what you don't know so the parties can adequately educate you.

PROFESSOR CAPRA: You'd think that kind of warning would be useful because if they testify at trial, they are going to have to explain themselves to a jury. If the judge doesn't understand, the jury is not going to understand. So that is an important point. You just say, "I don't understand," and you make them explain.

JUDGE SCHROEDER: So, one of the issues we are dealing with is this issue of overstatement of an expert's conclusion. When you have *Daubert* motions, does the question of overstatement get raised in that context? For example, I suppose if it's a forensic case and they want to testify to a "match," perhaps that question is raised. But, in some cases that I have seen, it looks like maybe the ultimate degree of confidence that an expert gives for an opinion may not show up until the trial. So, do you usually resolve any overstatement questions in your *Daubert* motions or are there some that somehow get past that and then they show up at the trial phase or the hearing phase? To put it another way, does the *Daubert* motion process resolve the overstatement issues or are there cases when it does not?

JUDGE SARGUS: One of the problems with answering that question is that I have *Daubert* issues in various types of cases. Typically there is a lot of money involved and the experts are highly credentialed and we do get into questions about opinions going too far, or an opinion giving a legal conclusion, or the "ultimate issue" kinds of questions that have to be resolved. So, I do bump into those overstatement questions in a *Daubert* hearing. In other cases, though, when you are dealing with somebody bumping into something at a Walmart and somebody holding themself out as an expert on displaying things in a store—a very different kind of expert—worrying about overstatement becomes even a bigger issue because they are not as sophisticated.

PROFESSOR CAPRA: Well, what about an expert who relies too heavily on a study? In other words, she takes the good parts of the study and rejects the rest. The resulting conclusion is a form of overstatement, saying "I can conclude on the basis of a cherry-picked study." That would get regulated in the hearing.

JUDGE VANCE: Right.

JUDGE CHHABRIA: Well, I think this concept of overstatement is probably covered in the *Joiner* case that you mentioned—the gap between methodology and conclusion.[32] That's not to say it wouldn't necessarily be useful to have it in the Rule because it might prod judges to focus on that aspect of the *Daubert* inquiry more, but I think that overstatement comes up with regularity in the papers. I think that is something you can start to root out in the papers. And what I have found is that when you have a hearing

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

and, as Sarah mentioned, the expert report is drafted by the lawyer—and I think oftentimes the expert doesn't really give terribly careful consideration to what is in that report. But when you get the expert on the stand, they will often dial back some of the overreach that is contained in the report and sometimes, again often in response to questions from the judge, they will often even dial back things that they said in their deposition.

PROFESSOR CHENG: Can I follow up on that? When we are talking about overstatement, is it so apparent that surely the jury could understand that? Or that on cross at trial, would the opposing counsel make that apparent so that the jury would deal with it on its own? Or is it overstatement, in ways that you normally see, in that it becomes opaque and therefore misleading to the jury and the jury would never be able to figure it out?

PROFESSOR CAPRA: That is the question that the Committee has been discussing, whether overstatement is a question of admissibility or weight.[33]

JUDGE SARGUS: In the area of experts, the idea that overstatement can be remedied on cross-examination or comparison to other witnesses—I'm not confident of that just because they are experts. Their specialty is so great that I'm not sure a lay juror would comprehend that the expert is overstating a conclusion.

JUDGE VANCE: On the issue of exaggeration, I definitely think it is covered under the current Rule under the *Joiner* analysis. In the Fifth Circuit, the reliability test applies to the linkage between the method and the conclusion and at every step of the process,[34] so I clearly think that it is covered under the current Rule. I do have an issue with a formulation of a Rule that prohibits exaggeration of conclusions based on a reliable method reliably applied. I don't understand how you can have a reliably applied method where you are going to say "I'm 95 percent or 99 percent confident" from a method that does not generate that confidence level and cannot generate that confidence level. I don't know how that is a reliably applied methodology.

So, I think in packing in those two things in the verbiage of the Rule—that is somewhat of a disconnect for me. I think it would be helpful to judges to alert them to a concern about witnesses testifying to "a reasonable degree of scientific certainty." I have seen a recent opinion from a judge in West Virginia taking on "reasonable degree of medical certainty" and pointing out that it is meaningless.[35] It doesn't mean anything to anyone and so don't use

33. *See* ADVISORY COMM. ON RULES OF EVIDENCE, AGENDA OF MAY 3, 2019, at 62 (2019), https://www.uscourts.gov/sites/default/files/2019-05-evidence-agenda-book.pdf [https://perma.cc/99JE-PUTQ] ("The Advisory Committee is also considering an amendment to Rule 702 that would address some courts' apparent treatment of the Rule 702 requirements of sufficient basis and reliable application as questions of weight rather than admissibility, without finding that the proponent has met these admissibility factors by a preponderance of the evidence.").

34. *See, e.g.*, Knight v. Kirby Inland Marine Inc., 482 F.3d 347, 355 (5th Cir. 2007) ("[T]he expert's testimony must be reliable at each and every step or else it is inadmissible.").

35. Edwards v. McElliots Trucking, LLC, Civil Action No. 3:16-1879, 2017 WL 3611848, at *3 (S.D.W. Va. Aug. 22, 2017) (noting that "the phrase 'reasonable degree of medical certainty' has no relationship to medical science whatsoever").

it. And so I think judges are taking that on in the regular *Daubert* process, but calling their attention to the findings of these scientific studies and limitations on conclusions is helpful.

JUDGE LEE: I want to pick up on the question of admissibility versus weight.

PROFESSOR CAPRA: Yes.

JUDGE LEE: I think, in the end, what I tell my clerks is that it's less of a bright line and more of a continuum. What I try to do—my guidepost—is: would a reasonable juror be able to understand the subject matter of the cross-examination to a sufficient degree that they can meaningfully weigh the deficiencies versus the probative value of the testimony? But it really comes down to, "What are you talking about?" Are you talking about a complicated multivariable regression or are you talking about an expert that says, "Oh, well, you know, in order to calculate the volume of the cube you multiply height times width times depth, right?" If it is the latter, and the objection is "Well, you are supposed to do three things and you only did two," I think that a jury could probably weigh that. But if it's something as complicated as, "You are overstating the literature because you are looking at this study when that study didn't consider these variables while this study did," I think, in my mind, it depends on whether or not that is a type of objection that can be effectively raised on cross-examination—number one—given the constraints of a trial. And number two, if it can be, whether it is something that a reasonable juror, in my mind, can actually get their arms around and do in a meaningful way. I think it is unlikely in my example of overstating the literature.

PROFESSOR CAPRA: Yes.

JUDGE CHHABRIA: Again, when we are talking about one of these complicated scientific inquiries, it's not most *Daubert* motions. But for these ones, you know, the judge is able to have seven days of *Daubert* hearings. Before the expert takes the stand, the judge reads the briefs, reads the expert reports, maybe looks at some of the expert deposition testimony, and reads the actual studies that the experts are talking about and has a lot of time. The jury is sitting there in the trial, has not read the studies before the expert comes up and testifies, has not read any of the briefs, and doesn't even get to bring the studies back into the jury room to look at. They are just shown quotes on the board that the expert wants them to see in support of this opinion that they are hearing for the first time. So, I think it is much easier for a judge in the *Daubert* process to root out overstatement in a complicated case after climbing the learning curve than it is for a juror who is in the heat of trial. And that is often exacerbated by the fact that in civil trials we are increasingly imposing time limits, though that is a justifiable practice. We are all very conscious of not wasting the time of the members of the community who have been called in to serve as a jury, but a downside to it is that the jurors don't get to spend nearly the time that the judge does looking at this evidence.

PROFESSOR CAPRA: What happens in that situation where you perform a gatekeeper function on experts on both sides and find that both sides' experts are admissible? First, how can that be? And second, when it happens, how does it play out with the jury? Conceptually, how does it work that you can say that both sides pass *Daubert*?

JUDGE SARGUS: Well, I think that is the process. You get conflicting testimony, often based on a different take on disputed facts, and jurors are there to decide conflicting facts. But I have a lot of cases where I could look at this and say that each opinion has some basis in fact, some science behind it, is reliable, and fits all the *Daubert* requirements—but their conclusions are different. They are focusing on different parts of the same picture.

PROFESSOR CAPRA: I guess it works if one side's expert is relying on a set of facts and another expert on a different set of facts and then you just prove the facts. The jury can do that. But when they are relying on different theories, I think it would be difficult for a jury to figure out. So, in your experience, how does it work when juries see these battles of experts?

JUDGE VANCE: Not to sound like a cynic, but when I was a lawyer, we always said, "You don't win a case on cross." You're not going to win a case on cross-examination, and so I think cross-examining an expert is not going to carry the day with a jury. They are going to go with the overall narrative of the case, the story in their mind of who should win, and if the expert is in parallel with that version of the case, that side is going to win.

So, if you let the expert in and the jury likes that side, they are going to go with them, but I don't think the cross-examination of the expert is going to produce an "aha" moment for the jury where they are going to go, "Well, that settles that." I just don't think that is the way it works.

JUDGE ORRICK: Well, except in the cases where the expert is really central and the expert is very defensive on cross-examination.

JUDGE VANCE: Yes, if he's not likable.

JUDGE ORRICK: Yes. I think the optics of experts, once you get past the gatekeeper function, are most important. I want to go back to agree with my colleague from the Northern District, except for the idea that we have seven days to spend on *Daubert* hearings. The notion that we need an additional statement in the Rule about overstatement, I think, is just going to make judges' lives worse because, I think, reliability takes care of overstatement in the ways where it counts. If we add an additional element to 702, then that is just going to be an additional five pages in a brief about why this person should be excluded.

MS. NESTER: Can I jump in there and ask—we've been talking in the realm of the civil world, but in the criminal world when an expert overstates, it could mean the difference between conviction and acquittal. So, there is the concern that in the criminal field, especially in the forensics field, overstatement that a jury is not intellectually capable of assessing could result in someone being incarcerated wrongly. That has happened many times over the years. So, you don't think that maybe tweaking that for the criminal side would be helpful?

JUDGE ORRICK: I think for any expert to say, for example, with probabilistic genotyping that there is a 1 in 270,000 chance of this person not being the person with DNA—I think that is gross overstatement—and so that is definitely a concern of mine. I pay most attention in *Daubert* cases to the cases where it really matters. And in criminal cases, particularly with scientific evidence, it really matters a lot. So, I do think we have to pay particular attention to that, but I think reliability does take care of that. I think education is more important than putting something in the Rule.

JUDGE LEE: I think with regard to the proposed amendment to the Rule, the one benefit it might have is that it does focus the adversarial process on that issue of overstatement. As I'm looking through the Fordham summary of the last symposium you guys had on forensic evidence,[36] one of the things that stuck out to me was that a lot of times those issues aren't even brought before me—so those arguments aren't made. And I don't know whether the arguments aren't made because of the strategic position of the lawyers or what have you, but as judges, we can only deal with the objections that are brought before us.

PROFESSOR CAPRA: You mean that defense counsel generally don't object to overstatements of forensic evidence?

JUDGE LEE: Right. They don't object on overstatement. They don't raise the issue. They object on other grounds, but I have rarely seen, and in criminal cases I've never seen, a defense lawyer object to an expert on the notion that they are overstating the results or the reliability of the results. On the civil side, I've seen that issue focused on as part of objections, and so it all comes within the reliability rubric but it is not typically defined as overstatement. So, if there is one particular benefit of an amendment, it might be just to get the lawyers thinking about it more.

PROFESSOR CAPRA: Yes. Right.

JUDGE CHHABRIA: If I could add one point to that. I had this opinion in which I was fairly open about my feelings about Ninth Circuit *Daubert* law.[37] And my interpretation of Ninth Circuit *Daubert* law is that it is actually quite forgiving of expert overstatement.[38]

PROFESSOR CAPRA: Yes.

JUDGE CHHABRIA: And I think the Ninth Circuit is different from other circuits, such as the Fourth and Fifth Circuits in that regard.[39] I agree completely with Bill that there is plenty of room in the reliability inquiry for a judge to strike an expert on overstatement grounds. But I wonder if including it in the Rule would still have the potential to shake the development of *Daubert* law.

JUDGE LIVINGSTON: When you say the Ninth Circuit is forgiving—are these cases where the Ninth Circuit will reverse and say "you shouldn't

36. *See generally* Symposium, *supra* note 4.

37. *See In re* Roundup Prods. Liab. Litig., 358 F. Supp. 3d 956, 960 (N.D. Cal. 2019).

38. *See id.*

39. *See id.* at 959–61 (comparing the reliability inquiry of the Ninth Circuit with other circuits).

have excluded the expert" after the district court judge has made a determination about overstatement?

JUDGE CHHABRIA: That's right.

JUDGE LIVINGSTON: Can I ask a follow-up question?

PROFESSOR CAPRA: Sure.

JUDGE LIVINGSTON: One difference that concerns me a little bit about the concept of overstatement in the Rule is the question of sufficient facts or data, reliable principles and methods, and reliable application. From my perspective as an appellate judge, I say, "Okay, was it an abuse of discretion, the analysis of those things?" And those all ring in my mind—I'm going to sound really like a law professor, sorry—those are all standards. So I ask my students, "What's a standard? Don't drive at an unreasonable rate of speed." So, as an appellate court judge, I'm asking, "Did the district court judge abuse discretion by making it essentially a determination that reliable principles were employed when they weren't?"—and that is a standard. So, there is a range in which reasonable people might disagree about that. And so it is not an abuse of discretion, I've heard, even though maybe there could have been a little bit more reliability or a little bit less reliability. But overstatement seems to be binary. You get it or you don't get it. Maybe I'm misunderstanding what overstatement means, but in some scientific disciplines, I would think reliable principles and methods are not really binary concepts.

JUDGE SARGUS: But I end up with a lot of *Daubert* motions that go not to the admissibility of the opinion but to how it is given and what can be testified to. So, at least in practice, someone who is overstating could be directed—and this would be at a *Daubert* proceeding—that they can't testify to something that is stark. You are going to have to change the testimony. Should I strike it? Or should I let the witness modify it?

And if I could go back to what Ms. Nester just mentioned, I've had more problems with experts in criminal cases than civil. We have different dockets—I get the whole range of cases. Once in a while, I'll do a slip-and-fall case with an expert who—whether they are an expert or not really is questionable. But in criminal cases, too, what happens, particularly on the low-end, for example, is that I get an illegal reentry case, the lowest level felony in the federal system, and usually the sentence is time served if you are convicted. We try this in a day. And I just had gotten a report from Professor Capra about the DOJ policy on overstatement.[40] We had a DOJ expert in handwriting show up and had to walk through everything the policy told him not to do—and he did every one of them. "This is reliable?" "Yep." "This is 100 percent reliable?" "Yep." "There have never been two

40. *See generally* ADVISORY COMM. ON RULES OF EVIDENCE, AGENDA OF OCTOBER 25, 2019, at 131–64 (2019), https://www.uscourts.gov/sites/default/files/advisory_committee_on_rules_of_evidence_-_final_draft_agenda_book.pdf [https://perma.cc/7UYG-BRVY]. For the Department of Justice's uniform language for forensic scientists, see, for example, Memorandum from the Att'y Gen. (Sept. 6, 2016), https://www.justice.gov/opa/file/891366/download [https://perma.cc/9NKV-EDWJ].

fingerprints of two different people ever established in world history?" I'm like, "Wow this guy is really amazing." [Laughter]

So, it's out there. It's a policy. But there was absolutely no objection, as you mentioned. We had a long discussion about that during the course of the trial thanks to your report, Professor Capra.

MS. SHAPIRO: Out of curiosity, when was that?

JUDGE SARGUS: The trial?

MS. SHAPIRO: Yes. When was this testimony?

JUDGE SARGUS: Last week.

PROFESSOR CAPRA: Last week. Whoa. Thank you, Judge.

MS. LOVITT: I want to follow up on the Ninth Circuit question. Is the issue one of application of reliability in the Ninth Circuit or a misapplication of the admissibility standard versus weight and credibility?

JUDGE CHHABRIA: I guess it is hard to draw a line between those two. It is more of a continuum. I think that Ninth Circuit law, if you put it in the terms of *Joiner*—the gap between methodology and conclusion—I read Ninth Circuit law as allowing a greater gap between methodology and conclusion than some other circuits.

PROFESSOR CAPRA: I think you are right about the overstatement in the Ninth Circuit because there was a ballistics opinion in the Ninth Circuit in 2017 which says it's okay to say within a reasonable degree of scientific certainty that this is a match, and that's an overstatement.[41]

JUDGE CHHABRIA: I think it is important to note that there are different kinds of overstatements. There is a fundamental overstatement, like, "I am confident to a certainty that this substance caused this person's cancer." And then there are overstatements that might be made in response to cross-examination, for example. I've had a situation where the expert says, "Well, I believe this person's cancer was caused by the substance" and then the opposing lawyer cross-examines them with a bunch of hypotheticals saying, "Would you believe if the facts were this or if the facts were that?" and they might say, "yes, yes, yes," and that might be an overreach. And in that case, you might just say—and this is something I've done—"You can't testify to that at trial." And, of course, if the other side wants to impeach you for having said that in the *Daubert* hearing, they can. But you can't testify. You can give your base opinion, but you can't testify to those extra matters.

JUDGE SCHROEDER: One of the proposals that we are looking at in Rule 702 would add a phrase to the effect of "you cannot claim a degree of confidence."[42] And you've mentioned overstatement comes in different flavors. "Degree of confidence" seems to be a more limited approach. What's your reaction to that notion?

JUDGE CHHABRIA: Can you clarify what you mean by degree of confidence?

41. United States v. Johnson, 875 F.3d 1265, 1280–81 (9th Cir. 2017).

42. *See* ADVISORY COMM. ON RULES OF EVIDENCE, *supra* note 40, at 63.

JUDGE SARGUS: Such as a question: Are you certain of that? Lawyers try to do that all the time.

PROFESSOR CAPRA: Yes, something like, "I'm absolutely certain that the substance caused the injury"—that kind of confidence.

JUDGE SCHROEDER: It's a more limited concept than overstating opinions that exceed the method.

JUDGE CHHABRIA: Right. An example that might not fit within the text of the proposed Rule but is an overstatement is that "this person was three times as likely to get cancer because they were exposed to this product." Then you look at the studies and you say the studies don't support that. That might not fit within the language of what is being proposed.

PROFESSOR CAPRA: But that fits with what Judge Vance was talking about: reliability in general. So, maybe this idea of degree of confidence might be actually separate from the reliable application of a reliable method. Confidence in the result might be a separate concept.

JUDGE VANCE: Right. I think it just depends on how you word it so that judges know what you are trying to get at with this Rule that is different from what they were doing before.

JUDGE ORRICK: I think that it is a great idea to focus on confidence in the result. Because, one, we could use it just at trial. We don't have to worry about this adding some new sheen to *Daubert* and the motions. But it does deal with a large swath of the overstatements that you get at trial. I think that's a good idea.

PROFESSOR CHENG: It seems awfully narrow to me if it is just about prohibiting experts from saying, "I am absolutely certain about the particular result." I think that would make sense. Otherwise, I think it is easy to misconstrue all of this language about overstatement. I completely agree with Judge Chhabria about how there are different kinds of overstatement. I think Ms. Nester's view about a forensic match seems to be a clear overstatement.

But if you are asking in a toxic tort case what overstatement is, I think it is incredibly difficult. You have a multivariant regression and the expert reaches a conclusion. Well, there are all kinds of places where one could say that the expert was overstating the case because there is this physical significance that you are worried about. But there is also the effect size that you are worrying about and you are trying to figure out how strong a conclusion you can draw based on the smaller sample size or the larger sample size or whether there are possible confounders that you couldn't get at. All of that, I think, makes it almost impossible to say, except in very extreme cases, that the expert is overstating the case. So, I understand what the Committee is trying to root out, which is the match problem, or the "I am 100 percent certain." Beyond those extreme cases, which to my mind seem to be something you can deal with with education, I'm not sure that the Rule itself won't be misused once you have that out there.

PROFESSOR CAPRA: Misused how? Everything that you talked about is what Judge Chhabria was doing on the reliability requirements in the Rule.

PROFESSOR CHENG: I think this goes back to what Judge Orrick had said, which is that once you have this added to the Rule, then it becomes the battleground. So everyone keeps arguing that this particular civil expert has overstated here, overstated there. That wasn't the Committee's intent.

MS. SHAPIRO: Can I just ask one question? It's a simplistic one, but if you have a medical examiner testifying that the cause of death was asphyxiation, would you allow that medical examiner to say: "I'm 100 percent sure. In my opinion—I've seen 10,000 of these cases—and in my opinion, I am 100 percent sure that the cause of death is asphyxiation"? Would that be permitted or is that too much confidence? Or is that an overstatement?

JUDGE SARGUS: I get serious heartburn about that because there is no margin of error, there is no peer review—all the things that *Daubert* talks about. And this is hard scientific evidence. It's not just some stray opinion. But I think if I were the prosecutor using this medical examiner, I would go through all the times there are conflicting factors and have to solve those. Were there conflicting factors in this case? Was there any other mechanism of death that you can think of that might have had an impact? Jurors can get that. I just think if we get into this realm of impossibility, it's overstatement.

MS. SHAPIRO: Right. I just wonder whether it is impossibility. That is his opinion. In his opinion, this was the cause of death.

JUDGE SARGUS: You are pretty close to 100 percent certainty if someone has a knife wound to their heart and otherwise they are in perfect health. [Laughter] But it's also unnecessary.

II. TOPIC TWO: INTERACTION OF EXPERTS AND JURORS

PROFESSOR CAPRA: So, I'd like to move on to how we expose jurors to different kinds of experts. And one of the confounding things about *Daubert* is experience-based experts—experts on industry standards, experts on how restaurants use tipping policies, experts on police practices. And so when you get an expert like that, how do you approach it? What do you make them do? I mean, when they say, "I look at it and this is my conclusion." I see in the opinions of the panelists that you require them to explain how they reached their conclusion, but it seems to be a very difficult process. What about a person who says, "I know all about police practices," for example?

JUDGE SARGUS: My experience is that, assuming this person has thirty years of work experience and maybe has published some articles and given some training, the grind there isn't admissibility versus inadmissibility. It's the framing of the opinion: staying away from deliberate indifference or legal conclusions. We end up spending a lot of time sorting through what is permissible and what is essentially mixing law and fact in an impermissible way.

JUDGE ORRICK: I think another thing you look at with those folks is how much experience do they have that is broad-based and how much of it is specific to the individual case? So, in one of the cases that I had, the gang expert that the prosecution wanted was the guy who had been investigating

this particular gang.[43] He knew a lot about this particular gang and some other gangs in the neighborhood but he didn't have the broad-based knowledge that was going to be helpful.[44] So, I didn't let him testify.[45] In the old days, you would bring in the dad who was the carpenter and the dad would testify about how you do these particular things and that would qualify as an expert opinion. I think you just have to stay away from those people who are sort of tightly tied to the case who are offered as experience-based experts.

JUDGE SARGUS: Did they bring the expert in under Rule 701[46] or 702 in the gang case?

JUDGE ORRICK: That's a good question. I don't know the answer to that question.

JUDGE SARGUS: I find that we get that confused all the time.

PROFESSOR CAPRA: In criminal cases, there are many cases where the prosecution divides it up so there is a Rule 701 witness and a Rule 702 witness. For example, one expert testifies to how the Crips operate in general and then the person who infiltrated the particular gang testifies about how that gang's operations match that of the broader group.

JUDGE ORRICK: In my case, the witness was going to be testifying both ways. I let him testify to the facts that he knew but did not let him give opinion testimony with respect to those facts.[47]

PROFESSOR CAPRA: Judge Vance?

JUDGE VANCE: Another thing that you can do sometimes with experience-based experts, say plumbers and electricians, is to determine whether or not there are some standards that they can look at—like maybe OSHA standards, local plumbing codes, or best practices in the plumbing industry to see if they have used any of that. I'm always looking at whether or not they can point to something objective that supports their opinion other than, "I'm an expert, I'm experienced, I've looked at that and this is what I think." And so, sometimes, if you can find some objective standards somewhere in a code or that he's using, that is helpful.

And then on the policing point, the American Law Institute is working on a project on policing best practices.[48] If that gets approved down the road, that could be source that the court and the expert could consult to provide some sort of standard as to whether or not the opinion is grounded in what experts think are the best practices. But I don't think we should give up on looking around to see if there is something that should govern these experience-based experts. And often they could test the experts, too, if they

43. *See generally* United States v. Williams, No. 13-cr-00764-WHO, 2016 WL 899145 (N.D. Cal. Mar. 9, 2016).

44. *See id.*

45. *See id.*

46. FED. R. EVID. 701 (governing opinion testimony by lay witnesses).

47. *See generally Williams*, 2016 WL 899145.

48. *See, e.g.*, *Principles of the Law: Policing*, A.L.I., https://www.ali.org/projects/show/police-investigations [https://perma.cc/2GQ4-TU8C] (last visited Feb. 14, 2020).

wanted to—but they just don't. Sometimes experts say that it's just experience, but it is something courts really could test if they chose to do it.

PROFESSOR CAPRA: Judge Lee?

JUDGE LEE: I think that with experience-based experts, you definitely focus on their qualifications more than a scientific expert and you really try to get to the bottom of what their experience is. Does their experience relate to the opinions that they can offer? The other thing I try to think about is whether the topic is within the realm of a scientific expert. Is this experiential expert trying to take the place of a scientific expert? In other words, is this an area where a scientific expert could actually offer this type of testimony? An example would be a case involving race tires. The question is whether or not a particular tread design was better in wet driving than others. And so, you could have a race car driver come in and say, "I drive cars all the time and I have driven these tires and in my experience these tires are better at handling in particular circumstances." Or you could have an engineer come in and testify to that. So, I try to figure out if the experts are testifying in an area that science has dealt with.

PROFESSOR CAPRA: And then what do you do? Do you say, "I want an engineer instead of this experience-based expert"?

JUDGE LEE: That allows me then to dive into what standards apply. Are they aware of these engineering standards? Are they aware that this was done and that this was looked at? What is their knowledge about alternative tread designs and how are they factored in?

PROFESSOR CAPRA: Great point. Some of the opinions I've read from the panel about experience-based experts indicate that you tend to look at where the expert is relying on sufficient facts or data—such as whether they actually went to investigate the accident scene or whether they conducted basic tests. Maybe that's a possible way of regulating the potential that the experience-based expert is merely providing an ipse dixit.

PROFESSOR CHENG: Is the idea then that reliability under *Daubert* is relative depending on what kind of evidence is out there versus absolute—which sometimes people think *Daubert* requires?

JUDGE VANCE: Everything is relative.

JUDGE SARGUS: That is true when you get into a bigger policy picture, particularly in mass torts. If we are talking about absolute scientific certainty, then that means one hundred years from now. If anybody was injured this year, they go without any sort of proof of a claim. So, I think *Daubert* is trying to strike that reasonable balance of requiring enough science that it is not junk science. But if we are waiting for scientific certainty, of course, it is never going to happen. And second, to get even close to that, decades will go by without people being able to recover for injuries. So, it's a difficult balance.

PROFESSOR CHENG: And just to clarify my statement, it is the idea that the level of rigor that you require depends on what is out there at the moment, or what you can get at the moment.

JUDGE SARGUS: Yes. I agree with that.

JUDGE LIVINGSTON: And so, if the best we can do is the race car driver who says "I have driven in the rain many, many times and these tires are better than the other," that may need to be sufficient for this case.

JUDGE VANCE: But why would it have to be sufficient if it's not good enough? I mean, if it is not enough to support the opinion—just because there is nothing else, it doesn't mean you need to allow an unreliable expert to testify. You just don't have a case.

JUDGE SARGUS: That is true. And *Daubert* may require that in some cases. But if it is somehow within the permissible *Daubert* spectrum and that is all you have, that goes to the issue of probative value and you do the 403 balance.[49] It's the only thing that you have.

PROFESSOR CAPRA: There is case law regarding experience-based experts that states *Daubert* doesn't really apply or doesn't apply in the same way to such experts or that the *Daubert* factors are not relevant.[50] So, there is a lot of flexibility, I guess.

JUDGE SCHROEDER: Do you think that *Daubert* has liberalized the admission of expert testimony in the main or do you think it's made it harder to get experts admitted?

JUDGE VANCE: Oh, it's made it harder. *Daubert* was like the summary judgment motion trilogy.[51] They did more to signal than what they actually said. I think, once again, the Court sent a signal, particularly in *Joiner* and in how *Kumho Tire* was applied, and gave an indication saying that it is liberalized because we are looking at more than just general acceptance. But the way it is actually applied, I think, has made it much more restrictive.

PROFESSOR CAPRA: And especially extending the reliability requirement to nonscientific experts.

JUDGE VANCE: Yes.

PROFESSOR CAPRA: And the whole gatekeeping function—that has been much stricter.

JUDGE VANCE: I totally agree.

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49. FED. R. EVID. 403 ("The court may exclude relevant evidence if its probative value is substantially outweighed by a danger of one or more of the following: unfair prejudice, confusing the issues, misleading the jury, undue delay, wasting time, or needlessly presenting cumulative evidence."); *see also* Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579, 595 (1993).

50. *See, e.g.*, United States v. Valdes, 681 F. App'x 874, 881 (11th Cir. 2017) (finding that *Daubert* was inapplicable to an experience-based firearms identification expert); United States v. Davis, 397 F.3d 173, 178–79 (3d Cir. 2005) (holding that "the factors in *Daubert* were intended to apply to the evaluation of scientific testimony, and they ha[d] little bearing" on the testimony of an experience-based narcotics expert); *see also* First Tenn. Bank Nat'l Ass'n v. Barreto, 268 F.3d 319, 334 (6th Cir. 2001) (holding that *Daubert* "may be of limited utility in the context of non-scientific expert testimony").

51. In 1986, the Supreme Court decided three cases focusing on the summary judgment standard. *See generally* Celotex Corp. v. Catrett, 477 U.S. 317 (1986); Anderson v. Liberty Lobby, Inc., 477 U.S. 242 (1986); Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574 (1986).

III. TOPIC THREE: GENERAL AND SPECIFIC CAUSATION EXPERTS

PROFESSOR CAPRA: So, next topic. How about specific causation and general causation in tort cases? I would first like to talk about how to separate the two. I mean, conceptually of course, they are separated. But obviously they get gnarled up together. So, I would like to start with Judge Sargus, who had the question of separating out general and specific causation experts, and Judge Chhabria, who had this issue as well.

JUDGE SARGUS: Well, let me first thank Judge Vance for giving me 3500 cases involving this.[52] [Laughter]

As judges and lawyers, it is so easy to differentiate those two terms, general and specific causation. But there is a fine line. These 3500 cases came out of a class action settlement, and in the settlement, there was a science panel created.[53] DuPont was the defendant and paid for the expenses of the panel.[54] It agreed that if the science panel found a link between the chemical used in the manufacture of Teflon and particular diseases, then DuPont would not contest general causation.[55] They could contest specific causation. The terms were not any further defined than general versus specific. So, as we tee up the first *Daubert* issue, you've got a urologist in a kidney cancer case who says there is no way there is any specific causation here because the plaintiff's water system didn't have a sufficient level of this chemical in it to make it a specific cause.[56] But that is testimony as to general causation. The science panel had already determined that there was general causation at that level. So, it became a *Daubert* issue on the question of "fit."

And I struck the opinion, finding that general causation was off the table.[57] If the expert revisits general causation problems to find no specific causation, the contract that DuPont entered into prohibited that. So, it's easy to differentiate general and specific causation in theory, but those concepts bleed together in ways that make *Daubert* issues more complicated.

PROFESSOR CAPRA: They bleed together in a fundamental way. If you are doing a differential diagnosis to find specific causation, you have to rule in a particular cause, and that is the general causation question, right? Isn't that the problem?

JUDGE CHHABRIA: Yes. General causation is part of the analysis of whether something caused a particular disease in a particular person—that is very important. And it is actually one of the things I wish I had done better

52. Judge Vance is the former chair of the United States Judicial Panel on Multidistrict Litigation, which is responsible for sending MDL proceedings to particular judges. *See Roster of Current and Former Judges of the United States Judicial Panel on Multidistrict Litigation*, U.S. CTS., https://www.jpml.uscourts.gov/sites/jpml/files/Current_Former_Judges_of_the%20Panel-10-16-2019.pdf [https://perma.cc/AK7K-4MF6] (last visited Feb. 14, 2020).

53. *See generally In re* E. I. du Pont de Nemours & Co. C-8 Pers. Injury Litig. (*DuPont*), 337 F. Supp. 3d 728 (S.D. Ohio 2015).

54. *Id.*

55. *Id.* at 734.

56. *See id.* at 734–37.

57. *See generally id.*

in the Monsanto *Roundup* case.[58] And I'll say a couple of things about that. The case is ongoing, so I need to be a little bit careful about what I say, but everything I'm about to say is in the public record already. I made a decision to phase the pretrial litigation, look at general causation first, take expert testimony on general causation, and make a decision whether the plaintiffs made it past the hurdle of general causation. If they couldn't present evidence from which a reasonable jury could conclude that this product is capable of causing cancer, then they automatically lose and all 2000 of the plaintiffs—

JUDGE VANCE: Don't look at me. [Laughter]

JUDGE CHHABRIA: —that Sarah sent me would lose. And then if they get past that, we do specific causation then. I think it always depends on the case. It is often worth phasing it that way, or at least sometimes it's worth phasing it that way. I'm glad that I did it. But there are a couple of things I wish I had done differently. One is that you've got to pin down the parties on what they mean by general causation, and the problem that I had was that the plaintiffs' experts came in and were arguing, essentially, that Roundup is capable of causing cancer in the abstract.[59] And the defendants were coming in and saying, "Well, Roundup is not capable of causing cancer in the kinds of exposures that people are experiencing in the real world today."[60] So, there is a little bit of a disconnect in the testimony of the competing experts. We spent a lot of time hashing that out during the *Daubert* hearings, and that is something that I wish I would have guided everyone to reach a meeting of the minds on early in the proceeding. Precisely what do we mean by general causation? And I sided with the defendants on that question—general causation is conditioned on exposure that could realistically occur.[61] That has to be what general causation means, but it forced the plaintiffs' experts to tweak what they were doing, which raised a whole different set of issues.

And then another thing I wish I would have done better is to think more carefully about the issue that you have identified, Dan, which is when a specific causation expert comes in and the foundation of their opinion is the general causation point—and it's part and parcel of the same opinion. But if the parties are going to be able to bring in specific causation experts later, and that will include testimony about general causation, then what is the point of phasing it in the first place? What is the point of having the first phase where all you are doing is focusing on general causation? Maybe that is an argument against phasing. What I ended up doing in my case was to say, "I'm sorry, Monsanto, I know you want to bring these specific causation experts in and you want them to give a whole new opinion on general causation, but you are the ones who asked for this case to be phased and you are the ones who argued that we've got to do general causation first." And

58. *See generally In re* Roundup Prods. Liab. Litig., 358 F. Supp. 3d 956 (N.D. Cal. 2019).

59. *See generally In re* Roundup Prods. Liab. Litig., 390 F. Supp. 3d 1102 (N.D. Cal. 2018).

60. *See generally id.*

61. *See id.* at 1108.

so I said, "Your specific causation experts must merely piggyback off of the general causation experts and can't reargue the point of general causation in the form of a conclusion on specific causation." But I think that was a little uncomfortable for the specific causation experts to do because they are accustomed to explaining why they rule something in and then explaining why they rule something out. So, it was a difficulty. And, again, it's just something that I wish I had gotten ahead of after I made the decision to phase the case.

PROFESSOR CAPRA: So, it was like in Judge Sargus's case, where the defense experts were ruling out specific causation and basically rearguing general causation?

JUDGE CHHABRIA: That's how I saw it, yes.

PROFESSOR CAPRA: Judge Lee had a case where the specific and the general causation melded together as well. It was the asbestos case.[62] Do you want to talk about how that worked out?

JUDGE LEE: Sure. This was a case that I received after it went through the MDL process—an asbestos case. And the issue was that the plaintiff's expert had this very broad opinion and, in the end, at a *Daubert* hearing, I got the plaintiff's expert to state what his opinion was, which was really reliant upon the "any exposure" theory—so that a single fiber of asbestos is enough to trigger injury.[63] And so, the question was, is that scientifically reliable? Is there enough information out there? And what I came to understand is that, in asbestos cases, there are basically the same three experts that are packaged together, and they just go from trial to trial to trial to trial. And they don't incorporate any of the particular facts of a particular case. They just have their general opinions that are applicable to all of their cases.

PROFESSOR CAPRA: Because they don't need to particularize given their theory. It is enough that any individual lives in a universe with asbestos, right?

JUDGE LEE: Exactly. So, we had a *Daubert* hearing, and I ended up striking that expert because there was no opinion about the dosage that caused the injury, how much was necessary to cause the injury, and no particularized analysis of the exposure in the case at hand.[64] So that was an example of amalgamation of general and specific causation.

JUDGE CAMPBELL: I would be interested in whether you all agree with the idea that what we are talking about now is primarily a case management issue. I've had the same situation where I excluded general causation experts. The party who successfully excluded them moved for summary judgment and the plaintiffs came back and said, "No, our specific causation experts can also cover general causation." That is a case management issue where you say, "No, you had your opportunity to disclose general causation experts, you didn't disclose these people as general causation experts, the deadline for disclosing them has passed, the general causation experts you

62. *See generally* Krik v. Crane Co., 76 F. Supp. 3d 747 (N.D. Ill. 2014).
63. *See id.* at 750–55.
64. *See id.*

disclosed have been excluded, and you can't use these undisclosed people to address general causation." That seems to me to be as much a case management issue as a Rule 702 issue.

JUDGE CHHABRIA: It is a case management issue, but it is about how to manage the case in a way that is going to give you the best ability to get at the truth and to put you in the best position to examine the scientific evidence in the most effective way. So I don't know if I see a clear distinction between the label of a case management question and the label of a 702 question.

JUDGE VANCE: I think it would be helpful if at the Rule 16[65] conference you ferreted out what these experts propose to do and how much overlap there is and make clear that general causation is going up once. So, if your specific causation experts intend to rely on their general causation conclusions, you better throw their general causation opinions in the mix when I'm deciding that because I'm not doing it twice. Ferret that out in the beginning. And then I think you are perfectly entitled to cut off the specific causation experts if they gravitate toward general causation.

JUDGE SARGUS: In simpler cases, the *Daubert* motions that I see are in conjunction with the defendant's motion for summary judgment. So if the general causation expert is knocked out, the case is over.

JUDGE VANCE: It really helps, I think, to get the parties in early and to talk about the experts, to try to get them to get rid of overlapping experts, to tell them there is going to be one *Daubert* motion per expert and not fifteen, and to make really clear if you can understand the expertise that they are going to be talking about to find how this is going to be structured going forward. You can always change it, but I think it helps to try to sort that out early on in the case.

PROFESSOR CAPRA: Well, the bifurcation works really well if you find they didn't have general causation. It gets more complicated when you find to the contrary.

JUDGE CHHABRIA: That's for sure.

JUDGE VANCE: Then they settle a lot of times. [Laughter]

IV. TOPIC FOUR: UNIFORMITY—HOW DIFFERENT COURTS ADDRESS EXPERT TESTIMONY IN *DAUBERT* DECISIONS

PROFESSOR CAPRA: So, I want to go for a couple of minutes to the question of uniformity. We have a code of evidence that is ideally to be uniformly applied. But there are a lot of situations where there are conflicting decisions on the same evidentiary question regarding expert testimony. As we have already been talking about MDLs, I will start with Judge Vance and ask about the principle of uniformity in *Daubert* decisions in MDLs and beyond.

JUDGE VANCE: One of the things that the MDL panel looks at in cases where there are going to be expert issues is whether or not the *Daubert* issues are going to overlap. We look at it for two reasons. One is the possibility of

65. *See* FED. R. CIV. P. 16.

conflicting rulings and the mess that can make and the duplication of effort of judges all deciding these complex *Daubert* motions so that it is often more efficient to have them decided by one judge. That is not the only reason an MDL may be formed. An MDL may not be formed when that is a factor, but it is something that is considered in the formation of an MDL—whether it is going to be *Daubert*-intensive and whether there is a possibility that you would have forty, fifty, sixty, eighty judges in the country deciding the same question. But having said that, even if you have an MDL, you often have the *Daubert* issues coming up in state court, too. And what MDL judges do sometimes is they try to coordinate *Daubert*/*Frye* practice with the state court judges where you might have a joint "science day" where the state court judge is invited to come in and hear the scientific presentation. The state and federal court might agree upon discovery protocols to try to get the timing in sync. It might be an agreement on who goes first on a hearing or maybe even doing a joint hearing. I know Judge Fallon in my court has done a joint *Frye*/*Daubert* hearing with state court judges where they listened to the *Daubert* evidence all at once and had a joint hearing.

PROFESSOR CAPRA: So even though the state court had different standards—

JUDGE VANCE: They applied different standards, but they listened to the same presentation. And so there are ways that you can try to coordinate the process, and hopefully judges will see things the same way. But if they don't, that's why you've got a court of appeals.

PROFESSOR CAPRA: I guess that the broader question of uniformity, beyond the MDL procedure, is what do you do if you are reviewing a *Daubert* decision and you disagree with precedent on the same expert testimony that you are reviewing? For example, Judge Orrick, when you reviewed expert testimony on DNA extraction, there was case law that accepted it under *Daubert*, and you rejected it.[66] I guess, the goal is to reach uniformity, but what are the limits to uniformity?

JUDGE ORRICK: In the end, I'm doing the right thing. The DNA issues that I had—they weren't really conflicting opinions. I drilled down in the hearing and found a lot of the inability of the lab to have been validated. There were a number of different fact-specific issues there. When I see different opinions about expert testimony that the guy has been giving across the country—

PROFESSOR CAPRA: Like that one, right? Where the expert had been excluded in four courts?

JUDGE ORRICK: Right.

PROFESSOR CAPRA: Or admitted in four courts?

JUDGE ORRICK: I pay attention when my colleagues have struck somebody. Then I probably dig a little harder to see whether I want to agree with them. I'm always swayed when people around the country have been doing something, particularly if they have been doing it consistently.

66. *See* United States v. Williams, 382 F. Supp. 3d 928, 938 (N.D. Cal. 2019).

JUDGE LEE: I think for me, it's definitely a data point, those other decisions, but in the end, I would say that I try to do what's right in that I try to come to the right decision—and a decision that the subsequent court would also agree with. And so that is really the driving force. When we had this whole "single fiber," "any exposure" theory, there had been so much written about it, so much litigation—cases all over the place. And in the end, after reading the cases, I just try to come to what I think is the right result. I think that, in the end, over time, the right result will end up being the uniform result.

JUDGE CHHABRIA: Dan, I don't know if I'm allowed to ask you a question, but I guess the question is—you said the goal is to reach uniformity—

PROFESSOR CAPRA: That's the goal.

JUDGE CHHABRIA: Why?

PROFESSOR CAPRA: That's why we have the Federal Rules of Evidence.

JUDGE CHHABRIA: Why is the goal to reach uniformity? I mean—

PROFESSOR CAPRA: It's a big country and everybody should get the same Rule. That's the goal.

JUDGE CHHABRIA: What about percolation? I mean, our legal system is based, in part, on the idea that there will be percolation of issues and maybe it is okay that district courts are disagreeing about issues and that will help to flesh out different ideas and ultimately allow the court system to get the right answer.

PROFESSOR CAPRA: I get that point. But when it comes to evidence rules, they should be written so that percolation should not be necessary with the evidence rule because the evidence rule should be clear, and there shouldn't be much dispute about them. That's the goal. It's the utopian goal, Judge.

JUDGE CHHABRIA: Meaning that the goal should be that the *Daubert* ruling in the Northern District of California should be the same as the *Daubert* ruling in the Southern District of Florida?

PROFESSOR CAPRA: On the same expert with the same opinion making the same showing, yes. That should be the goal. And that goal is hard to effectuate where you have got the Ninth Circuit, as you put it, with a more liberal attitude toward expert testimony than some other circuits. It is an impossible goal if the circuits are setting different standards.

JUDGE CHHABRIA: With respect to uniformity, I came across a very interesting and difficult question that I don't think anybody has grappled with yet, and it relates to the MDL process. I, of course, have all of these cases from all over the country, right? And I'm conducting this *Daubert* inquiry sitting in the Northern District of California within the Ninth Circuit. So, should I be emphasizing Ninth Circuit law for all of those cases? Or should I only be emphasizing Ninth Circuit law for the cases that originated in the Ninth Circuit? Should I be placing greater weight on Fourth Circuit law for the cases that came from North Carolina? And sometimes the answer to that

question might be outcome determinative because the circuits will squarely disagree on the admissibility of expert testimony.

JUDGE VANCE: But that is true in MDLs. If I have an MDL in the Fifth Circuit, you are going to get this clash of law, which does not make people happy. Summary judgment standards are going to be the Fifth Circuit standards regardless of where this case came from and you are going to apply the law of the circuit.

JUDGE CHHABRIA: But is that fair?

JUDGE VANCE: Well, that's a different question. And it has been discussed.

PROFESSOR CAPRA: —that the MDL assignment could be outcome determinative?

JUDGE VANCE: Well, why do you think we can get two hundred people in an auditorium arguing about where to send the case?

JUDGE SARGUS: I have 6000 hernia mesh cases from forty-nine states.[67] I'm all for uniformity. [Laughter]

JUDGE CHHABRIA: Well, you can't specifically identify a clear distinction between Ninth Circuit law and Fifth Circuit law on *Daubert*. It's just more of a feel, right?

JUDGE VANCE: Nuance.

JUDGE CHHABRIA: So, do you apply a different nuance to different cases? And I ended up saying, "No, you don't do that." But I actually think that is a very hard question, and it's not clear to me that uniformity should trump the notion of the plaintiff getting the benefit of the law where they filed the case.

JUDGE SARGUS: And it is far beyond *Daubert*. The same question arises for any number of procedural rules and standards on which the circuits do not agree.

JUDGE VANCE: Of course, the plaintiff would get the benefit of state law on any state law substantive claims. But as far as procedure, it gets federal procedure and as long as I have been affiliated with the panel, you've got to have one procedure because otherwise you would be applying Seventh Circuit law to this and Fourth Circuit law to that. It would just—you think you've got it bad with 2000 cases. [Laughter] It would be even worse.

JUDGE CHHABRIA: But it did make me wonder. I was thinking about this question and I was also thinking about the issue of percolation versus uniformity. It's not obvious to me that uniformity is the only interest that we have here in this MDL context. But it made me wonder, maybe your 3500 cases should have been spread around to nine different judges in nine different circuits. Maybe they should have stayed within the circuit.

JUDGE SARGUS: I'll vote for that. [Laughter]

JUDGE VANCE: That's a different discussion.

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67. *See generally In re* Davol, Inc./C.R. Bard, Inc., Polypropylene Hernia Mesh Prods. Liab. Litig., 316 F. Supp. 3d 1380 (J.P.M.L. 2018) (mem.).

PROFESSOR CAPRA: That is an excellent discussion. We are going to take a ten-minute break and we will start again. Thank you so much.

[Break]

PROFESSOR CAPRA: Before we start on another topic, Judge Sargus would like to provide a small clarification on his earlier argument about a government expert making an overstated conclusion on fingerprints in his court.

JUDGE SARGUS: Yes. I mistakenly referred to an expert as a DOJ employee. He was an ICE employee, so he was not subject to the DOJ guidelines on overstatement of forensic expert opinions.

PROFESSOR CAPRA: Your point about overstatement, though, is still well-taken, Judge Sargus. Experts who are not covered by the DOJ guidelines are still called by federal prosecutors to provide overstated opinions on forensic issues.

V. TOPIC FIVE: REVIEWING DIFFERENTIAL DIAGNOSIS TESTIMONY UNDER *DAUBERT*

PROFESSOR CAPRA: I would like to continue our conversation about specific and general causation by turning to some cases in which experts conduct a differential diagnosis to determine a specific cause and it is agreed by the parties that some possible causes for the plaintiff's condition are unknown. It seems very difficult to come to a conclusion about a particular cause by ruling out other causes, where some of those causes are unknown. How do you review such testimony under *Daubert*?

JUDGE SARGUS: I have a long opinion on that.[68]

PROFESSOR CAPRA: Yes, I know you do.

JUDGE SARGUS: So, there were two types of cancer in these cases. One was kidney cancer and one was testicular. Both of them have a series of known risk factors, as most cancers do. And then there are a number of cases reported as having unknown causes, unknown etiology, idiopathy. So, that's the defense word, idiopathic. So, if you had 80 percent of the cases with unknown etiology and you try to do a differential diagnosis, what does that do?

PROFESSOR CAPRA: Yes.

JUDGE SARGUS: But of course, idiopathic means, in a scientific sense, "we don't know" as opposed to "there is no cause." Those two concepts are completely separate, and in the kidney cancer case where I first got into this, there are known risk factors. There is an age factor, there is a race factor, there are some behavioral factors, some hereditary factors, and the doctor who was the specific causation expert for plaintiff went through each of these and ruled them out. Then we get back to general causation. He also relied upon a science panel study that was a huge epidemiology effort involving 70,000 people tested and found that the defendant's chemical is a known cause. So, he could conclude that it was more likely than not that the kidney

68. *See generally DuPont*, 337 F. Supp. 3d 728 (S.D. Ohio 2015).

cancer was caused by ingesting the chemical in the water supply. So, it's a difficult issue theoretically. I don't think it's unduly difficult in practice.

PROFESSOR CAPRA: Is the idea just to rule out the known causes and just leave the unknown causes to the jury? Is that how it worked?

JUDGE SARGUS: Well, on cross he was certainly asked, "Are many of the people you see with kidney cancer without a known cause?" But his comeback was that they didn't drink this water, either. And this water has chemicals in it linked to kidney cancer. Other witnesses established all that as a known connection to the cancer at issue. So, his argument was that we might not have a known cause in most cases. But we do here.

JUDGE CAMPBELL: Well, how does that work? If you have the plaintiff in front of you, the doctor doesn't know if it was caused by the water or if he is one of the 80 percent of people who get it from some other cause. How can he say it's the water when a whole bunch of people get it from other unknown causes? How do you know he is not one of those?

JUDGE SARGUS: So, what he would say is that you look at risk factors, and thanks to a lot of science on this, you could take—I'll take the testicular case because I've tried more of those. It could be genetic. It could be from HIV. It could be from hardening of the testicles. You can rule all those out first. So, it's not just an idiopathic versus chemical exposure. There are other known risk factors. And then it is a "more likely than not" analysis in which you put all these risk factors together. He's had this water in his system for years and so it is more likely that it was the cause than an unknown cause, given the absence of risk factors.

JUDGE VANCE: What did the epidemiological study show on the level of association?

JUDGE SARGUS: We had big fights about that. And these cases are still pending, so like Judge Chhabria, I've got to be a little careful here. The parties picked a level: 0.1 part per billion in the water. If you had that in your drinking water, it was all testable for years. For more than a year, they would test all of these sixty conditions that were alleged in the class action and then the science panel would do an up-or-down. Either it's linked or it's not. And we had a lot of fights because, of the 90,000 people in the class, 3500 of them had one of the conditions. The other 86,500 all had their claims dismissed with prejudice. So, one of the arguments DuPont made was that we get to look at the cohorts, and they put them into quartiles. The risk went down for some and up for others. They wanted to be able to argue that. But the agreement said that you are either in or you are out, and if you are in, you get the benefit of a finding of general causation. So, the dosage for general causation was not an issue.

JUDGE CHHABRIA: We had this issue of unknown causes come up in the *Roundup* case[69] as well. I think the problem that you are getting at, Judge Campbell, is—let's say you had a situation where everything has been ruled out except for one thing, but the disease has a high rate of idiopathy. So, is

69. *See generally In re* Roundup Prods. Liab. Litig., 358 F. Supp. 3d 956 (N.D. Cal. 2019).

it okay for an expert to say, for a disease with a high rate of idiopathy, "Once I have ruled everything else out—and there is only one risk factor that I can't rule out—it is automatically that risk factor that caused the disease"? What I said in my ruling was that probably would not be okay and, to the extent that the experts mean to imply that, they can't say that. But what the experts did say was that, because I haven't ruled out Roundup and because the plaintiff was exposed to such a significant extent to this risk factor, I can conclude specific causation more likely than not. These were plaintiffs who had been really using a lot of it over a large number of years. What I ruled is that that opinion is permissible because it was combined with the exposure data, the exposure information.

JUDGE SARGUS: Going back to Judge Campbell's point—it was a good one. In our case, we had general causation established. I think that made a big difference. Without that, you really can't get the specific causation with idiopathy present. I think that is where you get the problem.

VI. TOPIC SIX: CREDIBILITY, RELIABILITY, AND EXPERTS WHO RELY ON THE WORK OF OTHER EXPERTS

PROFESSOR CAPRA: Thank you. So, I would like to move on to a different issue. Sometimes what I see in cases is that there is an expert who is testifying on the basis of work that is being done by somebody else. For example, the expert testifies about a survey and they are not actually heavily involved in the survey. The survey is being done by other people who are specialists and the adversary doesn't get to cross-examine or depose those underlying people. You get this kind of capstone expert. How do you treat that? Of course, experts can rely on all sorts of information. But at some point, you have to wonder if they are just a mouthpiece. I know that Judge Lee had something on that in his jurisprudence, so I thought I would ask him to start off.

JUDGE LEE: So, in the Seventh Circuit, we have this case called *Dura*,[70] which addresses the issue about experts relying upon other experts and what needs to be done by the trial court under *Daubert*. I dealt with this most in environmental contexts. For example, you have a hydrogeologist that also relies upon soil sampling that is taken by other experts, or the case that I think Dan proffered, that the EEOC brought against DHL and the EEOC presented a statistician to look at the various DHL driver routes.[71] The allegation was that the driver routes were allocated in a racially discriminatory manner.[72] The statistician relied upon a company that specializes basically in geostatistics. And so, they took the routes, they put them into a commercially available software program that parsed out all the routes and where they went, and they put it in a spreadsheet that the expert could review. The issue was that the EEOC did not disclose that geostatistician and that company.

70. *See generally* Dura Auto. Sys. of Ind., Inc. v. CTS Corp., 285 F.3d 609 (7th Cir. 2002).

71. *See generally* EEOC v. DHL Express (USA), Inc., No. 10 C 6139, 2016 WL 5796890, at *2 (N.D. Ill. Sept. 30, 2016).

72. *See id.* at *1.

The DHL attorneys came in and objected, saying, "Look, we don't have an expert report from the geostatistician. We don't know how reliable their work is."[73] The EEOC's expert statistician argued, in response, that statisticians rely upon these types of underlying statistics all the time, so no disclosure of the underlying experts was necessary.[74]

In the end, I looked at the software—it was commercially available and the framework I had in my mind in that particular case was similar to the framework that I use in evaluating compilations of admissible evidence under Rule 1006.[75] The question was, "What sort of judgment was the underlying expert using?" Was it just simply gathering some data using a commercially available, widely used software—just entering it in—or were there judgments made about what data gets in and what data does not? Are they tweaking the data? And so, in that case I thought that they were more of a compiler of information, basically a 1006 witness.

But I've had cases in the environmental context where the expert was just kind of a figurehead—for example, a hydrogeologist relying upon soil samples taken by other companies. Oftentimes, what happens is that a company that does remediation has historical soil samples done by other companies and so the new expert comes in, adopts those results, and then builds upon them. Then the question becomes, "Well, what about the prior data?" And, of course, the hydrogeologist's argument is that they rely upon soil samples all the time. And then the question becomes, "Should the defendants have an opportunity to cross-examine the soil sample people?" And if they don't, what does that mean? And in that context, I did end up striking that portion of the expert's testimony. When I looked at the soil data and the gathering methodology—and there was some dispute as to whether or not they looked at the right samples—where the samples were taken, and the fact that the main expert couldn't really testify as to those issues, I thought it was necessary for the defendant challenging a soil sampling to have someone come in and try to defend it. They couldn't find anyone, so I ended up striking it.

PROFESSOR CAPRA: So, there is a line somewhere to be drawn there, depending on what the underlying expert is doing. Very interesting.

VII. TOPIC SEVEN: JUDICIAL GATEKEEPING VERSUS JURY FACT-FINDING

PROFESSOR CAPRA: So, the next issue I would like to discuss comes right out of *Daubert*, where the Court states that what a judge is supposed to do as a gatekeeper is not to assess the expert's credibility but their methodology.[76] So, credibility of the expert would be for the jury. I'm just wondering what the judges think of that, because I think you do take into

73. *See id.* at *5.

74. *See id.*

75. FED. R. EVID. 1006 (providing that a "proponent may use a summary, chart, or calculation to prove the content of voluminous writings, recordings, or photographs that cannot be conveniently examined in court").

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

account an expert's credibility in a number of situations. Judge Vance, can you start us off on how the credibility of an expert might actually become an issue in a *Daubert* hearing?

JUDGE VANCE: I think the issues of credibility and methodology do bleed together and sometimes there are two phases of the same question. I had an issue with an exposure expert who made an estimate of the exposure to gasoline that the plaintiff had a few years ago—that according to a study in his own report was enough to kill you in six minutes.[77] The exposure expert estimated that the plaintiff was exposed to this amount of gasoline for hours over more than a year and that he was about one-and-a-half times the lethal level in the expert's estimate.[78] And yet nobody died of toxic gasoline exposure. So the expert's testimony about exposure was completely contradicted by the facts in the case. When he was confronted with it in the *Daubert* process, he wanted to withdraw the opinion. And I said, "Okay, you can withdraw the opinion but you did present the opinion, and this speaks to a low level of intellectual rigor. It says something about how you approach analyzing and collecting data, and so I think it is relevant to your overall analysis."[79] Is that the same thing as saying "If you did this, I can't believe anything else you are going to do"? Not exactly, but it's sort of like that. If that had been the only problem with that expert, it wouldn't have been dispositive, but that lack of rigor was part of a pattern that all went in the same direction that contributed to his exclusion.

I had another case where a social worker diagnosed a policeman with PTSD after he choked on a chicken bone in a chicken soft taco and he also said he had erectile dysfunction and a lot of other problems.[80] And this social worker didn't find out that the policeman had lost a mother and a brother the same year, that he still goes back to the same Taco Bell, he still eats chicken soft tacos, and he never passed out from the choking incident. When confronted with all of this, the social worker said that it was still his opinion that he had PTSD from choking on a chicken bone in a chicken soft taco, even though he is a policeman, he carries a gun every day, and he is exposed to all kinds of risks.[81] So, whether or not that was a credibility call or a reliability call, I excluded the expert.[82] And I said he didn't interpose any professional judgment on what he was hearing when he considered this information and came up with this conclusion. It just was not something that I thought I could not let in—whether that was a credibility call or not.

PROFESSOR CAPRA: Judge Orrick?

JUDGE ORRICK: I think that credibility and reliability here are the same thing, in that you would not allow somebody who could not testify reliably—as in Judge Vance's situation. I had a DNA expert from an accredited lab

77. *See generally* Burst v. Shell Oil Co., 104 F. Supp. 3d 773, 780 (E.D. La. 2015).
78. *See id.*
79. *See id.* at 780–81.
80. Lassiegne v. Taco Bell Corp., 202 F. Supp. 2d 512, 514, 516 (E.D. La. 2012).
81. *See id.* at 519–22.
82. *Id.* at 524–25.

who testified hundreds of times in federal court. He testified in a *Daubert* hearing about—there was a double murder and a small amount of DNA, very small.[83] He got results below the stochastic threshold and applied his conclusions from that and considered them inconsistently.[84] He enhanced because there wasn't very much DNA. He enhanced the DNA but he didn't do it using the protocols that his lab—he owned the lab—had established so that he could double them up.[85] Then he didn't take any notes on how he had drawn his conclusions.[86] So, to me, that was a fairly simple call. Whether that was credibility or reliability, I didn't let him go on.[87]

JUDGE SARGUS: And that's what makes these rules interesting, to see the range of experts we are talking about. In MDL cases, there is usually a lot of money involved and the experts tend to be at the top of their field, so you are not going to get somebody with a prior felony conviction or someone who has been excluded as an expert in five other jurisdictions. You can get other issues. In the middle of these DuPont cases, the main specific causation expert, who was head of an oncology department at a very good hospital and was also in charge of residents, basically got kicked out of a position for being abusive to residents there. He told all the females, "You are here for two years, don't even think about having a baby." And the school dumped him. He is still a doctor. That had nothing to do with his opinions or his medical practice. You've got two issues. One, are his actions relevant to a *Daubert* review? I found they were irrelevant, because they did not go to the credibility of his opinion.

PROFESSOR CAPRA: I think you are right about that.

JUDGE SARGUS: The second issue is, could they use it against him in cross? Another hard issue. My experience has usually been with people who are in the medical business and their credentials are pretty hard to assail.

JUDGE CHHABRIA: I just want to quickly agree with what everybody has said. You know, the law says that we can and should exclude experts if their analysis is results driven.[88] If their analysis is results driven, that's a credibility problem.

PROFESSOR CAPRA: Right.

JUDGE CHHABRIA: But we are supposed to allow the adversarial process during trial to deal with credibility problems, and I think that shows that there really is a blur between credibility and reliability in most cases.

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83. *See generally* United States v. Williams, No. 3:13-cr-00764-WHO-1, 2017 WL 3498694 (N.D. Cal. Aug. 15, 2017).

84. *See id.* at *9.

85. *See id.*

86. *See id.* at *13.

87. *See id.*

88. *See, e.g.*, Claar v. Burlington N.R.R., 29 F.3d 499, 502–03 (9th Cir. 1994) (holding that "[c]oming to a firm conclusion first and then doing research to support it is the antithesis of [the scientific] method"); Perry v. United States, 755 F.2d 888, 892 (11th Cir. 1985) (finding that an expert who forms their opinion prior to beginning their research "may be less objective than he needs to be in order to produce reliable scientific results"); *see also* Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579, 590 (1993) ("[I]n order to qualify as 'scientific knowledge,' an inference or assertion must be derived by the scientific method.").

PROFESSOR CAPRA: To take Judge Sargus's example, there are bad acts that might impeach someone as a witness at trial, such as they had been fired in disgrace or caught stealing or something. But that may not be pertinent to whether they reliably applied a reliable methodology under *Daubert*.

JUDGE SCHROEDER: Does the fact that the *Daubert* motion might be case dispositive—and if there is a credibility issue in there, does that ever cause you to do anything differently?

JUDGE SARGUS: In the case where I struck the person whose opinion bled over into general causation, I struggled with that. It was the first of the MDL cases we were going to try. It was clear in my mind this was not permitted testimony on the one hand, but we teed this up over the years. Thinking long and hard, I let the defendant's expert witness still testify about his disagreement with the findings of the plaintiff's expert. So, he still was able to come in and give lots of testimony. MDL cases are pretty hard-fought, and one of the first questions the plaintiff's expert asked of this defendant whose causation testimony I'd stricken was, "You've been here for hours and you've never told the jury—you haven't offered your opinion on specific causation." Of course, that's true. But it's also true that it's not that he didn't have one but that I had struck it. He did have an opinion, so to say to him that he didn't have an opinion—that's not accurate.

PROFESSOR CAPRA: So, there are questions of expert credibility and then there are questions about credibility experts. Where an expert is testifying about something that could be considered an opinion about somebody else's truthfulness, how do you draw that line? That's a difficult line to draw.

JUDGE ORRICK: Just say no. [Laughter]

JUDGE SARGUS: There is a lot of case law on the topic of credibility experts.

JUDGE VANCE: Well, for example, what is malingering? That is something experts assess. That might be a credibility opinion, but it depends on whether or not the expert is just saying, "Well, I'm looking at him now and I don't believe him" or whether someone is analyzing something in a differential diagnosis.

JUDGE SARGUS: In a nonexpert area, the Sixth Circuit prohibits a lawyer from asking another witness whether they think that witness is lying, as it is essentially an opinion on someone else's credibility.

PROFESSOR CAPRA: There could be an opinion that is less direct—for example, an expert opinion on the unreliability of identifications. This actually could be thought of as credibility-based testimony—that the witness who identified the defendant is not credible.

JUDGE SARGUS: Well, if the expert testifies only about the science, that would inform jurors about certain things that might impact credibility. It should be allowed if the expert is staying only with the science—with all the different factors that impair the reliability of an identification.

PROFESSOR CAPRA: The distinction would be with general testimony that is permissible versus specific testimony, such as "it is my expert opinion that the witness made an inaccurate identification."

JUDGE SARGUS: I'm sure you tell your students this in your advice you give to them. [Laughter] So often the problem that we get into with experts is that it's a question too far. You don't say in your opinion, then, "Was the identification unreliable?" But you key it up in opening and then you definitely bring it home in closing: "You heard what the expert said, it matches this case to a tee. All the different factors, every one of them is present here." You don't have to pull the trigger and ask the question that is going to have an objection sustained.

PROFESSOR CAPRA: I guess it is a similar analysis about whether an expert crosses over into legal conclusions. You can come up to the precipice but cannot go over it.

MS. NESTER: I think some of the concern that we've had in prior meetings is that a juror hears the word "expert" and then automatically makes a credibility decision that this person—the judge has said—is an expert, which is why it is so troubling when experts overstate, which we talked about before. And it is interesting to me. I know a lot of judges talk to jurors after jury trials and get their opinions and hear their feedback, and I just am curious about your experience. Do jurors feel comfortable just completely deciding on their own that this expert is just wholly not credible? And the question is what role you should play. If the jurors are making that leap and if they have been determined to be an expert, they are automatically credible. How damaging can it be then when experts say something that is clearly wrong or unreliable or overstating? So, I'm just curious if you have talked to jurors after trials and if you've heard that they are struggling with whether they believe an expert, or if you agree they are prone to automatically believe an expert simply because they are an expert and the jury is not.

JUDGE SARGUS: Oh, I think they struggle. But in general there are competing experts, so you hope that aspect of overreliance on somebody because of a title disappears because each side has one. But occasionally, we'll have cases where one side has an expert—

JUDGE CHHABRIA: Particularly in criminal cases.

MS. NESTER: Exactly. That's what I'm thinking about.

JUDGE SARGUS: If it is a civil case, you start picking up on how much the expert is charging and hired testimony. There is a back and forth. But, yes, I think anytime you call somebody an expert, it takes it out of the normal credibility analysis that you otherwise give to a witness. So, that is why we have *Daubert*.

JUDGE VANCE: Although we also have an instruction that we give all the time for experts: "You assess their credibility the same way you do any other witness." That's one of our standard jury instructions. Whether they listen to that is something else. We tell them that the expert is entitled to give an opinion, but you give it the weight you think it deserves and you should take into account whether the expert has been paid for testifying. We have

this long instruction on experts that doesn't encourage them to accept at face value what experts are.

JUDGE CHHABRIA: I think there really is a difference on this question that you are asking between civil and the criminal cases.

JUDGE VANCE: I do, too.

JUDGE CHHABRIA: And on the civil cases, I would echo a point that Sarah made earlier, which is that, in most civil cases the expert testimony is not going to carry the day and it is going to depend on which expert's testimony meshes better with the narrative that comes out at trial. Obviously, there are exceptions, like maybe these big medical causation questions. But typically, I think that's the case in a civil trial. In a criminal trial, you often have the government bringing in an expert. The defense might not have a counterexpert. The government might bring in a gang expert or whatever the case may be, and I think there really is a concern in that context—when somebody's liberty is at stake—that too much weight will be placed on that expert. One thing I do is that I don't allow them to be called experts and I don't call them experts in the jury instructions. I say that it is opinion testimony.

PROFESSOR CAPRA: Right. Judge Richey had that rule. It is referred to in the Committee note to the 2000 amendment to Rule 702,[89] that it is a good practice not to call the witness an expert before the jury.

JUDGE VANCE: I think it is true that in criminal cases experts have, particularly if they are only on one side—the jury knows that they have to find this beyond a reasonable doubt, and it could be that extra thing to hold onto to make you think you made the right decision. If you can say, "Well, that is what the expert said." It might give a juror comfort to find this person guilty because there was somebody who was qualified and supposedly doing an objective type of analysis who validated my decision. I do think it is more of a problem in a criminal case.

JUDGE LEE: Although in one criminal case I had—it was in the context of cell phone data and location and the government put forth their FBI expert on cell phone data location information. In the end, the jury acquitted, and I went back and talked to them and they said they just didn't believe the guy.

PROFESSOR CAPRA: Did the expert overstate the accuracy of cell phone location data?

JUDGE LEE: He overstated the accuracy and he didn't account for the fact that if one cell tower is busy, then you have to ping to another one. He didn't necessarily have a very good explanation for that and the jury just said, "You know, we just didn't find him credible."

JUDGE CHHABRIA: And did those defects come out through cross-examination?

89. *See* FED. R. EVID. 702 advisory committee's note to 2000 amendment.

JUDGE LEE: Yes, it came out through cross-examination. With regard to the jury instructions, the Seventh Circuit[90] has an instruction much like, I think, the one in the Fifth Circuit,[91] which says that you evaluate expert witnesses that give opinions literally in the same manner as you would a lay witness. I wonder whether I'm going to change that for my next trial because it seems like, for experts, there are additional considerations that the jury might want to take into account. But I haven't decided yet. I'm still mulling it over.

PROFESSOR CAPRA: You should get back to the Advisory Committee on what you decide because that would be an interesting point for the Committee, too.

JUDGE LEE: For experts, there surely are other things or additional things that the jury might consider. For example, should they consider what rate of error there is? Should they consider whether or not the methods are widely recognized and reliable?

JUDGE CHHABRIA: Maybe the jury should be instructed that you should view expert testimony with extreme caution. [Laughter]

MS. NESTER: I vote for that.

PROFESSOR CAPRA: You could put the instructions in terms of the *Daubert* factors. Has it been tested, peer-reviewed?

JUDGE LEE: I was thinking about that, but I'd have to give some more thought about whether or not the *Daubert* factors really are more geared toward judges in the gatekeeping role as opposed to experts that have already gone through that process. Trial is not another *Daubert*, right? Not a second chance at admissibility—it's more about weighing credibility.

JUDGE MARTEN: If I could follow up on what Judge Chhabria mentioned a few minutes ago in eliminating the term "expert." I think that is a terrific first step and have done that myself in the instructions, and I advise lawyers ahead of time, "Don't tender your witness as an expert because I'm going to shoot you down on it and say 'I'll let you offer opinion testimony with this witness.'" One other thing that is just tangential that has come up here on criminal cases is the difference between civil and criminal. I'm sure everybody is aware that the Defender Services Committee is really emphasizing the need for federal defender offices and Criminal Justice Act[92] lawyers to actually retain people using funds to counter what is frequently expert testimony on the side of the prosecutions. I think that only bodes well for the system over the long haul.

PROFESSOR CAPRA: Thanks, Judge Marten. So, we have plenty more to do with the remainder of the time we have. I would like the panel's input

90. *See* COMM. ON PATTERN CIVIL JURY INSTRUCTIONS OF THE SEVENTH CIRCUIT, FEDERAL CIVIL JURY INSTRUCTIONS OF THE SEVENTH CIRCUIT 28 (2017), http://www.ca7.uscourts.gov/pattern-jury-instructions/7th_cir_civil_instructions.pdf [https://perma.cc/H2DR-L6JQ].

91. *See* COMM. ON PATTERN JURY INSTRUCTIONS, PATTERN JURY INSTRUCTIONS (CIVIL CASES) 33 (2016), http://www.lb5.uscourts.gov/juryinstructions/Fifth/2014civil.pdf [https://perma.cc/WGM5-ALQL].

92. 18 U.S.C. § 3006A (2018).

on a problem the Committee has been thinking about. There is a lot of case law, mostly in the circuit courts, actually, that says, "if the expert has a proper methodology, how you apply that methodology becomes a question of weight." And that is not accurate under Rule 702 because the questions of sufficiency of basis and reliability of application are specifically made questions of admissibility that the proponent must establish by a preponderance of the evidence. I do want to turn to Judge Orrick who discussed this issue in some detail in his opinion,[93] where the government argued, the methodology of the DNA extraction was fine and they just messed up in terms of the application and that defect could be handled by way of cross-examination.[94]

JUDGE ORRICK: So, this was another criminal case. It was a gang case—and I described to you the first DNA opinion that I did on the unreliability of the methodology. This same DNA was looked at six years later because this case has been going on for a long time. I tried the first group of five. This is the next group of four. In 2012, the methodology and the lab determined that, for this particular area, there is a chance of four in seven that the defendant was there.[95] They'd looked at thirteen different areas in the car.[96] There was only one area where they found anything—and four in seven.[97] So, they weren't going to use that against the guy, but times have moved forward and so now there is probabilistic genotyping. So, they reevaluated the DNA and determined that there was a one in 270,000 chance that it was someone else.[98]

PROFESSOR CAPRA: That's a big improvement.

JUDGE ORRICK: It was a remarkable improvement. And it would have been quite persuasive to any juror that this guy was actually there. The issues were that back in 2012, they determined that this DNA showed that there were five or more contributors to this particular area, and the more contributors you have, the less likely an extraction of one person's DNA is going to be reliable.[99]

Probabilistic genotyping has been developed to try to deal with that issue, and this lab, when the sample was reevaluated, determined that, although they thought there were five or more contributors in 2012, now they thought there were only four.[100] Because there were only four contributors, you could get to the one in 270,000.[101] A different person did the evaluation and determined that this relationship was very strong. There was inconsistency between the two experts, difficulty with the degrading of the DNA, and the failure of the lab to—they validated 78 percent accuracy when there were

93. *See generally* United States v. Williams, 382 F. Supp. 3d 928 (N.D. Cal. 2019).
94. *Id.* at 936–38.
95. *Id.* at 932.
96. *See id.*
97. *See id.* at 931–35.
98. *See id.* at 934.
99. *See id.* at 932.
100. *See id.* at 934.
101. *See id.*

only four people in the mixture and they had a 100 percent failure rate for more than four. How would they know if there were more than four in the mixture? So, I tossed that.[102]

JUDGE LIVINGSTON: Did that come up with a *Daubert* motion?

JUDGE ORRICK: That was another *Daubert*, so we had a *Daubert* motion in 2015 or '16 when we did the first group.

JUDGE LIVINGSTON: Did the defense have their own DNA expert?

JUDGE ORRICK: Yes. In our district, we've always had an expert for the defense when the prosecution is going to be presenting something that matters.

JUDGE CAMPBELL: Was this a CJA-appointed[103] expert?

JUDGE ORRICK: Yes.

PROFESSOR CAPRA: And so that issue of whether the test was reliably conducted, that's not something the jury can figure out?

JUDGE ORRICK: There was no way that the jury could figure that out, and it goes to a couple of the issues that we have talked about today.

PROFESSOR CAPRA: Right.

JUDGE ORRICK: The certainty of the probabilistic genotyping is, I think, a real problem for juries to be able to sort out.

JUDGE CAMPBELL: Can I ask a question on your question, Dan?

PROFESSOR CAPRA: Sure.

JUDGE CAMPBELL: The question of "can the jury figure out if it's wrong?" We sort of touched on that earlier, the question of "is this problem so obvious the jury will pick it up?" Is that really the correct question? It seems to me that if 702 says it's not reliable, you don't say, "Well, I'll send it to the jury because they can figure out it's not reliable." As the judge, you say this doesn't go to the jury.

PROFESSOR CAPRA: That is the point I was trying to make, Judge, that the question of application of the method is in Rule 702 for a reason because jurors can't figure out misapplication.

JUDGE CAMPBELL: But even if they could, it seems to me that if you say it is misapplied, you don't say, "Well, the jury will figure this out, so I'll let you give the testimony." You don't admit it.

PROFESSOR CAPRA: Correct. "The jury can figure it out" argument does not create an exception to the Rule 702 admissibility requirements. I am focusing on the other side of that coin—the reliability of application requirement is in the Rule precisely because the jury won't be able to figure out a problem in the application of an expert's methodology.

JUDGE LIVINGSTON: Can I just follow up on that? So, from this morning, I thought there was some—that you could have a case in which you make a determination of sufficient facts and data, reliable principles and methods, and reliable application for two different experts on the opposing

102. *See id.* at 936–38.

103. CJA refers to the Criminal Justice Act, 18 U.S.C. § 3006A (2018).

side on the same issue. In theory, both satisfy the gatekeeper requirements. That might be a situation for you to think, "Well, the jury needs to be instructed more because they have to evaluate." They are not supposed to make their minds up on which expert looks better, so you are evaluating the science. That has to be part of what they are doing.

PROFESSOR CAPRA: Surely *Daubert* does not preclude such an instruction. I would say it actually invites that instruction.

JUDGE SARGUS: But that is pretty typical of cases where there are medical issues. There are going to be experts giving completely opposite opinions and the jury has to sort it out.

JUDGE CHHABRIA: One of the problems on the issue of methodology—you asked earlier about the cases that say, "as long as the right methodology is used, the opinion goes to the jury" and you said that is probably wrong. I agree with that. But one of the problems with that is that often the methodology is defined at a very high level of generality.

PROFESSOR CAPRA: Yes.

JUDGE CHHABRIA: So, for example, take the Bradford Hill criteria[104] in the epidemiology context or the ruling-in/ruling-out methodology for deciding what causes somebody's disease.[105] Yes, we all agree that there is the ruling-in/ruling-out methodology and everybody is using the ruling-in/ruling-out methodology, but they are applying it very differently. I think, a lot of times, somebody is applying it so badly that it should be excluded. But there are some cases which suggest, "No, we have this methodology and it is an agreed-upon methodology," and the experts come to different conclusions and therefore it is for the jury.

PROFESSOR CAPRA: Well, when you establish methodology at that level, then you definitely need an application requirement there. Mr. Lau?

MR. LAU: I have a question for Judge Orrick and it goes to education. So, how do you know to ask those questions about probabilistic genotyping to firm up the evidence? Because I don't think that would necessarily come naturally to all judges. Where did that information come from?

JUDGE ORRICK: Well, I was very interested in the DNA issues and I had written my first opinion on something that was important evidence in a case. So I just kept following it and reading it. It is really to your question earlier, Judge Schroeder. The cases where it is case dispositive or just extremely important are the only ones that I would have live testimony at *Daubert* hearings. I did on those issues and I let there be vigorous cross-examination, and I did my own research as well.

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104. The "Bradford Hill criteria" include "temporal relationship, strength of association, dose-response relationship, replication of the findings, biological plausibility, consideration of alternative explanations, cessation of exposure, specificity of the association, and consistency with other knowledge" to determine if there is a causal association between variables. *See In re* Lipitor (Atorvastatin Calcium) Mktg., Sales Practices & Prods. Liab. Litig. (No II) MDL 2502, 892 F.3d 624, 638 (4th Cir. 2018).

105. "[A]n expert must systematically 'rule in' and 'rule out' potential causes in arriving at her ultimate conclusion." *See* Higgins v. Koch Dev. Corp., 794 F.3d 697, 705 (7th Cir. 2015).

VIII. TOPIC EIGHT: SUPPORT FOR JUDGES IN REVIEWING EXPERT TESTIMONY

PROFESSOR CAPRA: So, in our remaining time, I would like to discuss possible ways to assist judges in mastering the science and other complexities that arise when reviewing expert testimony. And so, one of the issues that has often been discussed is whether judges could use some kind of support, some expertise in scientific areas specifically, but in other kinds of areas as well. Examples include a court-appointed expert witness under Rule 706,[106] or a technical advisor. Any thoughts on the panel?

JUDGE SARGUS: Speaking only for myself, I've used it rarely.

PROFESSOR CAPRA: Yes.

JUDGE SARGUS: To the competency issue in criminal cases, I've hired my own expert when there are people disagreeing. But beyond that, I've never used Rule 706 nor appointed a technical advisor.

PROFESSOR CAPRA: Well, in *DuPont*, you had a science panel.

JUDGE SARGUS: But I would expect they would never do that again.

PROFESSOR CAPRA: Did you order a science panel?

JUDGE SARGUS: Well, *DuPont*'s study cost just under thirty million dollars, so we struggled with the cost.

PROFESSOR CAPRA: Maybe you could order a cheap science panel. [Laughter]

JUDGE SARGUS: There is a quite a bit of expense in a science panel and an epidemiological study. It takes a large number of people, particularly if you are talking about rare forms of cancer. In this case it was 70,000 people.

PROFESSOR CAPRA: And the silicone breast implant was another case where they had a science panel, but that cost many millions of dollars.[107] It was a pilot project.

JUDGE SARGUS: And the Rule says you can impose the cost on the parties. I can see a unified cry from that, for that kind of money.

PROFESSOR CAPRA: Right.

JUDGE VANCE: The lawyers hate it when the judge appoints an expert, so you usually get pushback. You have to follow the Rule 706 procedure. I've done it very rarely. I can't remember more than once. It could have been more. I've done competency experts that I have appointed, so it's probably more than once.

But you have the issue that sometimes you don't find out that you need it until it's too late. You have to build in time for the expert to do the work, to get the other experts reports, to write a report, to be deposed. So you are building in all this time into a case and the expense and the cost. And then there is the issue of finding somebody who is truly—I mean, nobody is a

106. FED. R. EVID. 706 (governing the appointment of court-appointed expert witnesses).

107. *See generally* LAURA L. HOOPER ET AL., FED. JUDICIAL CTR., NEUTRAL SCIENCE PANELS: TWO EXAMPLES OF COURT-APPOINTED EXPERTS IN THE BREAST IMPLANTS PRODUCT LIABILITY LITIGATION (2001), https://www.fjc.gov/sites/default/files/2012/NeuSciPa.pdf [https://perma.cc/W8SY-7RUK].

tabula rasa—but somebody who is independent enough. The good thing about a court-appointed expert is that ideally they don't have a financial interest in the matter so that kind of cuts off, you would hope, that linkage between "I'm being paid to say this; a lawyer wants me to say these things; we need to win." A court-appointed expert would not have that incentive, but there are real practical drawbacks, and I think that's why judges do it really infrequently.

JUDGE LEE: I find that, in my experience, where I would really love to have a 706 expert is where the adversarial process doesn't provide me with the opposing view. And the way this often comes up is with motions of preliminary approval of class action settlements. I just dealt with a NCAA student concussion case, had an MDL panel, and the question was, "Is the money that the NCAA is providing and setting aside for this fifty-year monitoring program going to be sufficient?"[108] And so, the NCAA had this great economist from the University of Chicago and he did all this workup. The plaintiffs, of course, said "Yes, that works."[109] But, of course, for class action settlements, I had an independent duty to assess the adequacy of it.[110] On the one hand, I thought it would be really useful to have a Rule 706 expert on that.

On the other hand, I realized that, whatever money it would cost for the expert, I'm taking away from the settlement, from the class. So the expert who might improve the settlement would also harm the class members that the settlement should actually try to benefit. In the end, I just had the experts submit a couple other supplemental reports. I had them come in and testify, and I asked them a bunch of questions. In the end, I decided not to retain a 706 expert because I thought I had enough information. The number for the medical monitoring portion of the settlement was seventy million dollars. I didn't want to squander another two or three million just to satisfy, I guess, my curiosity or question to the nth degree with regard to the fairness of the settlement.

PROFESSOR CHENG: I'm hearing a lot of administrative concerns: it costs a lot of money; where do I find the expert?; the expert needs time so that creates delay. Do any of you have philosophical objections to the 706 court-appointed expert or the technical advisor in the sense that it makes you too much of an active judge, it doesn't respect the adversarial system? The reason why I ask is, about ten years ago I did a survey of judges at a conference—it was a mixed group of state and federal judges—and you would be astounded at the kinds of responses I got. I got responses all over the spectrum, from people saying, "Appointing an expert would be great and I would use this if I could because I want to get the right result," to people

108. *In re* NCAA Student-Athlete Concussion Injury Litig., 341 F.R.D. 580, 607 (N.D. Ill. 2016).

109. *See id.*

110. FED. R. CIV. P. 23(e)(2) ("If the proposal would bind class members, the court may approve it only after a hearing and only on finding that it is fair, reasonable, and adequate . . . .").

crossing out the entire survey saying, "We only call balls and strikes therefore I am not going to get involved and call my own expert."

JUDGE ORRICK: So, I will give you another answer to that question. We have a lot of patent cases in our district. I don't understand science all that well. I really don't understand patents. They are not written in English. I just don't like them. So, I've thought from time to time, "Wouldn't it be great to just hire somebody to give me the answer to a patent question?" And what I've been afraid of is that I would rely completely on that person and not do my job. I would not struggle with the issues, I would rely on somebody who actually knows the business. Now, I think the system ought to change so that I don't have to do patent cases anymore. [Laughter] But until that happens, I think I've got an obligation to do it and I worry about not doing my job if I relied on a court-appointed expert.

JUDGE SARGUS: Rule 706 really goes off in two different directions. There is the one just mentioned by Judge Orrick about educating the judges on certain issues. You are getting into a much bigger idea when you have a science panel. Just to be clear, I'm not going to take any side here. The biggest issue in these mass tort cases is usually general causation. An individual plaintiff can't afford an epidemiological study. So, if I were a defendant required to pay thirty million dollars for a study that implicated me in thousands of cases, you would be going from rules and procedure into something much more sensitive. I'm not saying I would be opposed to it, I'm just saying that would be the outcome of this if appointing a science panel became the norm. You would get a lot of blowback.

PROFESSOR CAPRA: Judge Chhabria?

JUDGE CHHABRIA: I was just going to answer Professor Cheng's question by asking a question of the judges on the panel. Raise your hand if you have had a party's expert come into your courtroom and testify in a way that was not results driven. [No hands raised]

JUDGE SARGUS: They are the odd witness. I've had people who were emergency room doctors, people like that, but anybody who has been retained, they are results driven.

JUDGE CHHABRIA: So, we all agree that even though, under the law, we are supposed to exclude an expert witness if his analysis is results driven, we all agree that every paid expert that we've ever heard testimony from has provided a results-driven analysis.

JUDGE SARGUS: They are there for a reason.

JUDGE CHHABRIA: And so, if that is true, why should we not really want to have one of our own experts? We are talking now, by the way, about the *Daubert* context, not at trial. In the *Daubert* context, why wouldn't we want to have somebody who we can ask questions of and will be confident will give us an honest answer and doesn't have an interest in the case?

PROFESSOR CAPRA: And you could limit the role. In other words, I don't get from this expert the answer to the dispute, such as does X cause Y. But I get the expert to explain what this term means, what that answer means, et cetera. And another benefit of having a neutral expert is that her mere

presence might cause the opposing experts to be less outlandish in their opinions. It's like having an observer at an election.

JUDGE VANCE: Well, the whole gatekeeper role interposes the court into the adversarial process anyway. If you have to do it, I don't think that the argument that, "Well, you are intruding on the adversarial process if you bring in an expert to help you with *Daubert* issues" is dispositive.

It is anticipated that you are going to have to get involved in making this determination, so I think getting help is not a problem as far as the adversarial system goes—as long as the parties are able to question the expert. But on the issue of appointing experts and when they can be helpful, in the NFL concussion case, Judge Brody appointed a special master to do exactly what you are talking about, Judge Lee—to evaluate that settlement and to determine whether or not it was fair to the players.[111] The master came back and said no. She rejected the settlement and they came back and put up a lot more money.[112] And so the expert was very helpful. The plaintiffs and defendants were all hunky-dory on the settlement and she just had misgivings about it and was helped by having a master.

JUDGE CHHABRIA: Oh, John, I was just going to offer to you, and I know this is a little bit off topic, but in the preliminary approval context—the concern about taking money from the settlement fund. You could say, "I'm denying the motion for preliminary approval because you have not given me sufficient information to assess whether this is a fair settlement and so you need to come back with something more." The "something more" might be providing the money for a court-appointed expert to allow me to assess the fairness.

JUDGE LEE: And in my case, the "something more" was I just wanted supplemental reports and disclosures to drill down a bit more to exactly what the expert was saying—I grilled him for about sixty minutes about my various concerns. But I think the concern about the adversarial process in some respects is—I don't think a Rule 706 expert necessarily intrudes on that for all the reasons that Judge Vance talked about. But also I find that when I most want one is when the adversarial process is not giving me what I need. So, it is a failure of the adversarial process that prompts me to want a 706 expert in the first place. I feel that the parties haven't addressed issues in a way that will allow me to make some of these decisions.

PROFESSOR CAPRA: And then it is easier to make them pay money if they haven't done their job, really. Judge Campbell?

JUDGE CAMPBELL: Well, my question was similar to what John just raised. This panel, in much of the discussion this morning, has been focused on MDL cases or other large cases where we've generally got good lawyers, good experts, and the issues are somewhat more sharply defined. A much bigger problem, I find, is in cases where the lawyers don't deal with *Daubert*

111. *See* Order Appointing Special Master, *In re* NFL Players' Concussion Injury Litig., 2:12-md-2323-AB (E.D. Pa. July 15, 2019), ECF 10739.

112. *See* Memorandum, *In re* NFL Players' Concussion Injury Litig., 2:12-md-2323-AB (E.D. Pa. Jan. 14, 2014), ECF 5657.

properly, don't present the right issues. I'm not looking for another expert, I'm looking for another lawyer [laughter] to help present the issues clearly. A question I have is whether there is something that can be done with the rule that will focus, sharpen what lawyers bring to the table when they come forward with a *Daubert* motion instead of what I call a cross-examination motion, where they call it a *Daubert* brief but they just put in there everything they can say that is bad about the expert and hope I do something with it. Is there something we can do that helps focus them on 702 factors and on the fact that the proponent must establish those factors by a preponderance of the evidence under Rule 104(a)?[113] It is rarely presented that clearly.

JUDGE SARGUS: I don't have an answer for you. Actually, that is a problem.

JUDGE ORRICK: You know, in our district, for preliminary approvals of class settlements, we have a very long list of things that the lawyers have to provide us that are well beyond the Rule and are very helpful in analyzing whether there is a fair settlement or not.[114] And I imagine that smarter people than I could come up with a list, maybe not a generic list but a list for lawyers by the second or third case management conference that says, "This is what I need to know. This is what you need to present."

PROFESSOR CAPRA: We need a best practices panel for lawyers.

JUDGE LEE: I mean, to some extent, the amendments to Rule 23[115] have tried to do that, right, on settlements. There is all this case law about what lawyers needed to bring up or show and the amendment tried to flesh that out. I think it has been really helpful in that context.

IX. TOPIC NINE: JUDICIAL EDUCATION EFFORTS

PROFESSOR CAPRA: So, now, to close out, I would like us to conclude with a discussion about judicial education efforts that would assist judges in managing and deciding *Daubert* issues.

The Advisory Committee is working with the FJC on developing judicial education programs on *Daubert*, currently with regard to scientific evidence, but hopefully more broadly. As judges, do you think such a program would be useful? And if you have any suggestions, we would like to hear them. Knowing what you know about judicial education programs, would *Daubert* be a topic that judges would be interested in?

JUDGE VANCE: I think the science in the forensic area would be really useful because that is something that a lot of us have not been indoctrinated on, and I think that would be helpful.

PROFESSOR CAPRA: Where you would take judges through the process of some forensic process, such as ballistics, and show what the issues are?

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113. FED. R. EVID. 104(a).

114. *Procedural Guidance for Class Action Settlements*, U.S. DISTRICT CT. FOR N. DISTRICT CAL. (Dec. 5, 2018), https://www.cand.uscourts.gov/forms/procedural-guidance-for-class-action-settlements [https://perma.cc/ZVG7-6JMP].

115. FED. R. CIV. P. 23.

JUDGE VANCE: Right. What the issues are, what the limits of the method are.

PROFESSOR CAPRA: Right. What the rate of error might be.

JUDGE VANCE: —what the rate of error might be so that they can identify how far, how much of that testimony they can let in and where they need to cut it off. I think that would be very helpful.

JUDGE LIVINGSTON: With this Rule, what we hear from the Federal Judicial Center has been very helpful. But one difficulty is that you can assemble a panel of very good experts, sort of a science panel, and that takes time and effort. But you could assemble them and you can invite judges—and it could be forensics or it could be epidemiology, it could be a lot of things. You may get forty judges to sign up. But it is costly to do it over and over again. And so, if you knew, for instance, such a panel had been assembled, such a program had been held and that it had been videotaped, do you think materials like that could supplement the Manual on Scientific Evidence?

JUDGE VANCE: Oh, sure. Sure. I think that people can get online and look at the program, especially if you have an issue coming up. I think that it would help to have such a program available because a lot of times judges don't get interested in an issue until they have it before them, and then you want it right away. If there is something online that you could access, that would be helpful.

JUDGE SCHROEDER: Would it be helpful to have it by type of problem? In other words, handwriting versus something else.

JUDGE VANCE: Yes. Yes.

JUDGE SCHROEDER: So that if you have a handwriting expert, you go to that one and—

JUDGE VANCE: Yes.

JUDGE SCHROEDER: —hear the issues.

PROFESSOR CAPRA: That's a good question.

JUDGE SARGUS: I think it is good to have specific subject, but it would also be good to have a presentation on some general scientific principles. Most of us don't come from a science background and we kind of learn it over the years, but I think you could do both the general and the specific.

JUDGE ORRICK: The FJC put on a climate science thing, which I went to, and the purpose of it was not to debate science issues but to say, "Here is the best evidence, these are the places that you look to determine what is true or not." It walked you through the scientific analysis of how you would deal with that issue. I think it would be helpful at the FJC national conference or something, maybe you take a couple of hours and talk about—

JUDGE VANCE: You are talking about the National Workshop?

JUDGE ORRICK: The National Workshop.

JUDGE VANCE: They do those three times, too.

JUDGE ORRICK: So, maybe do something on scientific principles and how they would apply and—

PROFESSOR CAPRA: And you have to do it in that kind of nonadversarial way.

JUDGE ORRICK: —pick whatever it is.

PROFESSOR CAPRA: Forensics is difficult, you know, with all the controversy about it. But you could try and do it as down the middle as you could.

PROFESSOR CHENG: I would encourage you to look at two things. One is the specificity of these programs. I think, if you pick out a specific forensic science, first of all, you get less bang for your buck than if you do something on general forensics principles—the general problems that you might have in forensics. Sure, you talk about handwriting as an example, but the program should be one that is much broader. The same goes for other kinds of science. If you are providing a statistics or epidemiology seminar, I think that is much more useful than anything that is directed at a particular area. The point I would make is that format matters. A lot of these conferences are often done in conference format and then you tape the person in a room kind of like this on a panel talking about things. It works well live, but it doesn't deliver the information that the judge might want in a concise way. There is a lot more filler, or there is a lot of interaction. You almost want to create for video purposes this kind of tutorial, so it is almost like distance learning or something like that rather than, "Well, we want to hold a conference with forty people and we taped it and now we put it online." I think you will get better return if you do it like a tutorial.

PROFESSOR CAPRA: One final thing. Judge Vance has a suggestion for some kind of red-flag list, a little chart or something instead of a whole full-blown treatise about any particular scientific area—such as, what red flags to look for in testimony about specific causation or about standards and practices or whatever the topic is.

JUDGE VANCE: Yes, that would be really helpful.

JUDGE CAMPBELL: I would echo that because we get a lot of material across our desk on education and other things. When you get a four-inch-thick FJC manual of scientific evidence, issue spotting may be the problem. Maybe you ought to ask the question because you don't always get objections in criminal cases, at least in my district. I don't get experts on the other side. They don't even object. Then I am looking at plain error and so I'm the one that has to do it. So, what would be helpful for issue spotting? Is that what you are thinking of with the red flag?

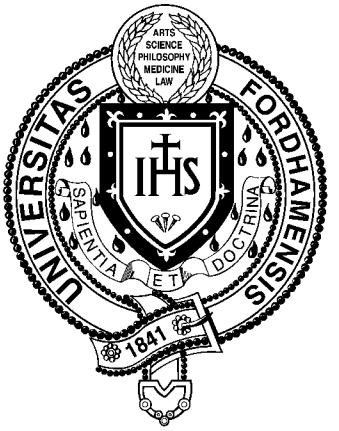
JUDGE VANCE: Exactly. What are the typical problems, shortcuts that people use in this type of testimony, whether it is forensics or whether it is epidemiology or engineering? If somebody is going to do it wrong, what are they going to do and what would you look for? The same thing with economics. I've asked experts, antitrust experts, on both sides, "How do I look for the problems?" And they will tell you. They can tell you right then and there what things people do to be result driven or to take shortcuts or to raise problems with their methodology. So, I think it would, by area, be helpful.

PROFESSOR CAPRA: We would hire those Rule 706 experts that nobody is using. [Laughter] We are coming to the close. I'm going to give it over to Judge Campbell to close the proceedings.

JUDGE CAMPBELL: Well, thanks. I get to do that because I chair the Committee that reviews what the Evidence Committee does. I've been sitting here through this morning thinking, "Gosh, I wish our Committee was here to hear all of the things you've shared."

702 is—well, *Daubert* is—a tough area. It is complicated. It varies greatly from case to case and expert to expert and lawyer to lawyer. It is, I find, very hard to answer the question, "How do you write a Rule that helps solve all of these problems and elevate the level of lawyering and judging that is needed?" That's what the Committee has been wrestling with for a few years, and, to me, the best thing we can do in trying to find that answer is listen to you experts and what is happening in your courts. So, I think it has been a valuable morning, and I'm going to recommend to the folks on my Committee that they read the transcript of what has been said here. I'm not sure what the answers are, but we have sure gained a lot of helpful information. The best part, from a selfish point of view, is I go back a better judge having listened to what you all have shared, so thank you very much for the time.

PROFESSOR CAPRA: Thanks to the panel so much. I'm so grateful. It couldn't have gone better in my view. And that is on the record. [Laughter]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