TENTATIVE DRAFT #2
ARTICLE VII

FOR DISCUSSION ONLY

REVISION OF UNIFORM RULES OF EVIDENCE ACT

NATIONAL CONFERENCE OF COMMISSIONERS

ON UNIFORM STATE LAWS

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REVISION OF UNIFORM RULES OF EVIDENCE ACT

With Comments

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ON UNIFORM STATE LAWS

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RULE 701. [Opinion Testimony by Lay Witnesses].

If the witness is not testifying as an expert, ~~his~~ the witness' testimony in the form of opinions or inferences is limited to those opinions or inferences which are (1) rationally based on the perception of the witness and (2) helpful to a clear understanding of ~~his~~ the witness' testimony or the determination of a fact in issue.

Reporter's Note

This proposal for amending Rule 701 eliminates the gender-specific language in the Rule. The change is technical and no change in substance is intended.

There are no other proposals at the present time for amending Rule 701.

RULE 702. [Testimony by Experts].

(1) **General rule.** If scientific, technical, or other specialized ~~knowledge~~ premises, or techniques, will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness ~~qualified as an expert as an expert by knowledge, skill, experience, training, or education~~ may testify thereto in the form of an opinion or otherwise~~.~~, but only if (1) the premises, or techniques, are reasonably reliable, and (2) the witness is qualified as an expert by knowledge, skill, experience, training, or education to provide that testimony.

(2) **Presumption of reliability.** The premises, or techniques, upon which the expert testimony is based will be presumed to be reasonably reliable if the premises, or techniques, upon which the expert testimony is based has significant support and acceptance within the relevant scientific, specialized or technical community. A party seeking to rebut this presumption of reliability must prove that it is more probable than not that the premises, or techniques, upon which the expert testimony is based is not reasonably reliable.

(3) **Presumption of unreliability.** The premises, or techniques, upon which the expert testimony is based will be presumed to be reasonably reliable if the premises, or techniques, upon which the expert testimony is based does not have significant support and acceptance within the relevant scientific, specialized or technical community. A party seeking to rebut this presumption of reliability must prove that it is more probable than not that the premises, or techniques, upon which the expert testimony is based is not reasonably reliable.

(4) **Other factors of reliability.** When applicable, the court shall consider the

following additional factors in determining the reasonable reliability of scientific, technical, or other specialized premises or techniques:

(a) the testing of the premises, or techniques, upon which the expert testimony is based;

(b) the adequacy of the research methods employed in the testing of the premises, or techniques;

(c) the extent to which the premises, or techniques, have been subjected to peer review and published;

(d) the known or potential rate of error in the application of the particular premises, or techniques; or

(e) the experience of the witness as an expert in the application of the particular premises or techniques.

Reporter's Note

At the suggestion of the Drafting Committee, this proposal for amending Uniform Rule 702 combines the proposals of Alan W. Tamarelli and David L. Faigman, set forth respectively at pages 3-4 and 9, infra, of this **Reporter's Note.** See also, Tamarelli, Jr., Alan W., Daubert v. Merrell Dow Pharmaceuticals: Pushing the Limits of Scientific Reliability--The Questionable Wisdom of Abandoning the Peer Review Standard for Admitting Expert Testimony, 47 Vand. L. Rev. 1175 (1994), and Faigman, David L., Making the Law Safe for Science: A Proposed Rule for the Admission of Expert Testimony, 35 Washburn L. J. 401 (1996). See further, Gianelli, Paul C., The Admissibility of Novel Scientific Evidence: Frye v. United States, A Half Century Later, 80 Colum. L. Rev. 1197 (1980). It is submitted for Drafting Committee consideration and discussion without necessarily reflecting the views of the **Reporter** as to the approach which should be taken in proposing amendments to Uniform Rule 702 to deal with the impact of the Daubert case and the diversity among the several states with respect to standards which should be employed in dealing with the admissibility of scientific, specialized, or technical evidence.

Subdivision (1) of the proposed rule embraces the approach of the Tamarelli in paragraph one of his proposal which retains the important emphasis on

relevance by requiring that expert testimony assist the trier of fact, but, unlike the existing Uniform Rule 702, requires not only that the expert be qualified, but that the premises, or techniques, upon which the expert testimony is based be "reasonably reliable."

Subdivisions (2) and (3) embrace the approach of Tamarelli in paragraphs two and three which raises a presumption of either the reliability or unreliability of the premises, or techniques, upon which expert testimony is based, depending upon whether the premises, or techniques, have significant support and acceptance within the relevant scientific, technical, or specialized community. The "preponderance of the evidence", or, more accurately, "more probably true than not" standard is embodied in the rule to rebut the presumption of reliability or unreliability. Tamarelli defends this approach as follows:

> Congress should consider an amendment that will produce accurate, consistent results without requiring judges to expend time they do not have playing amateur scientist. To do this while avoiding the pitfalls of Frye, any new version of Rule 702 must allow the more qualified scientific community to determine most questions of scientific reliability without automatically excluding ideas merely because they have not been tested universally. A new Rule 702 would do well to establish explicitly a rebuttable presumption that only testimony (whether scientific, technical, or specialized) derived by using methodology that has gained scientific acceptance in the appropriate field is admissible.
>
> An improved Rule 702 might read as follows: If scientific, technical, or other specialized information will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness may testify thereto in the form of an opinion or otherwise only if (1) the information is reasonably reliable, and (2) the witness is qualified as an expert by knowledge, skill, experience, training, or education to provide that testimony.
>
> Information normally will be considered reasonably reliable if it is based on premises, or derived from techniques, having significant support and acceptance within the relevant specialized community. A party seeking to object to a witness testifying thereto must show by a preponderance of the evidence that the information is not reasonably reliable.
>
> Information based on premises or derived from techniques not having significant support and acceptance within the relevant specialized community normally will not be considered reasonably reliable. A party seeking to have an expert base her testimony on this type of evidence must show by a preponderance of the evidence that this information is reasonably reliable.
>
> This amended Rule would serve a number of purposes. First, it would retain a firm emphasis on relevance by requiring that expert testimony assist the trier of fact. Second, like the Advisory Committee's proposal, it would introduce a requirement

that the testimony be reasonably reliable. This proposal, however, would address Daubert directly by establishing in the text of Rule 702 that peer review and acceptance should be the primary indicators of reliable expert testimony. Unlike Frye, though, it would not work as an absolute bar against admitting theories that are not generally accepted. Rather, it merely would establish a presumption that these theories are not reliable enough to be admitted.

By placing the burden on the proponent of testimony that is not generally accepted to show its reliability by a preponderance of the evidence, the enactment of a Rule similar to the one proposed in this Recent Development would discourage junk science by making it difficult, but not impossible, to introduce an expert's novel ideas if his theories have not yet gained significant support among his peers. The proposed Rule also would limit the number of objections to accepted theories by requiring the objecting party to make a showing of unreliability by a preponderance of the evidence. [footnotes omitted]

See Tamarelli, Alan W., supra, p. 3 at pp. 1199-1201.

Subdivision (4) incorporates additional factors, when applicable, which shall be considered by the court for purposes of determining the reasonable reliability of the premises, or techniques, upon which the expert testimony is based. It carries forward the factors laid down by the Supreme Court in the Daubert case, which are also embraced in subdivisions (a)(1) and (2) of the Faigman proposal, but without differentiating between the difficult dichotomy of "scientific" and "non-scientific" expert testimony.

The Drafting Committee should assess this proposal for amending Uniform Rule 702 in light of whether it meets the most common objections to the Daubert criteria for the admissibility of scientific, specialized, or technical knowledge. First, the proposal avoids the use of the terminology "scientific" and "non-scientific" knowledge and does not mandate that the Daubert factors necessarily apply in determining the reliability of scientific, technical, or specialized knowledge. The proposal thus leaves the door open to the admissibility of evidence in social science areas where the falsifiability and potential rate of error factors required by Daubert could rarely be met.

Second, under subdivisions (2) and (3), the threshold test for admissibility is the extent to which the premises, or techniques, upon which the expert testimony is based has significant support and acceptance within the relevant scientific, specialized or technical community. While this represents a Frye approach, the standard may avoid the pitfalls of Frye requiring a determination of what constitutes "general acceptance within the concerned scientific community." The proposal also ameliorates the view that the Daubert factors require the trial judge to fulfill the role of an "amateur scientist." Only if the reliability, or unreliability, of the premises, or techniques, is challenged will it be necessary to examine other factors as set forth in subdivision (2) of the proposed rule.

Third, arguably, by eliminating the focus on "scientific knowledge" from

the proposed rule, the factors set forth in subdivision (4) accommodate the admissibility of expert testimony involving only the application of a scientific theory or technique as opposed to the determination of the reliability of the scientific technique or theory in the first instance.

Fourth, with the approach taken in subdivision (4) of the proposed amendments, the rule arguably meets the concerns expressed with respect to whether the Daubert criteria apply when the expert is testifying solely on a basis of experience, such as automobile mechanics, or skeletal configurations. See, in this connection, Burgess v. Friedman & Son, Inc.,, 637 P.2d 908 (Okl.App. 1981) and Commonwealth v. Devlin, 365 Mass. 149, 310 N.E.2d 353 (1974).

Fifth, reinstituting a modified Frye standard as proposed in the amendments to Uniform Rule 702 may promote greater reliability in the evidence offered and admitted and avoid the criticism that the Daubert approach to admissibility "will result in a 'free-for-all' in which befuddled juries are confounded by absurd and irrational pseudoscientific assertions." See Daubert v. Merrell Dow Pharmaceuticals, Inc., 113 S.Ct. 2786, at 2798 (1993).

The background for the drafting of the proposed amendments to Uniform Rule 702 comes in the wake of Daubert v. Merrell Dow Pharmaceuticals, Inc., ___U.S.___, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993), holding that the following four factors are to be employed in determining the admissibility of "novel scientific evidence" under Rule 702 of the Federal Rules of Evidence:

1. Has the theory or technique been tested or is subject to being tested?

2. Has the theory or technique been subjected to peer review and publication?

3. What is the known or potential rate of error in applying the particular scientific theory or technique?

4. To what extent has the theory or technique received general acceptance in the relevant scientific community?

A number of proposals have been proposed for amending Rule 702 of the Federal Rules of Evidence as well as Rule 702 of the Uniform Rules of Evidence. The following has been suggested by Judge Michael B. Getty as a starting point for discussion in determining whether amendments should be made to Uniform Rule 702 to reflect the criteria established in the Daubert case for determining the admissibility of "novel scientific evidence":

Rule 702. [Testimony by Experts].

~~If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.~~

(a) Scientific Expert Testimony. If valid scientific knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by scientific training and education may testify thereto in the form of an opinion or otherwise.

For purposes of this Rule, when making preliminary assessments of validity pursuant to Rule 104(a), judges shall determine the adequacy of the scientific foundation for the testimony and, if applicable, the methodology or technique used to apply that knowledge to the specific case.

(1) The Scientific Foundation for the Testimony. In assessing the validity of the scientific foundation for expert testimony, judges must find that the basis for the expert's testimony has been tested. In addition, in order to determine the validity of those scientific tests, judges should consider, among other things,

(A) the adequacy of the research methods used to conduct these tests;

(B) whether the research supporting the expert's testimony was peer reviewed and published; and

(C) the degree of acceptance in the scientific community of the science supporting the expert's opinion.

(2) Expert Testimony Regarding Case Specific Facts. In assessing the validity of expert testimony on facts specific to the case, judges must find that the methodology or technique used to ascertain the pertinent fact or facts has been tested. In addition, judges should consider, among other things,

(A) the adequacy of the research methods used to conduct these tests;

(B) whether the research validating these methods was peer reviewed and published; and

(C) the error rate associated with the methodology used to ascertain the pertinent fact or facts.

(b) Non-Scientific Testimony. If valid technical or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, where scientific knowledge is unavailable or unnecessary, a witness qualified as an

expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.

Comment of Judge Getty on the Proposed Amendment to Rule 702

Upon review and after consultation with Professor David L. Faigman who filed the Amicus brief in "Daubert" before the United States Supreme Court on behalf of a group of law professors, it is my opinion that the only rule that need be changed is Rule 702. I am attaching hereto those provisions to the rules as drafted by Professor Faigman at my suggestion . . . . [See Faigman, In Making the Law Safe for Science: A Proposed Rule for the Admission of Expert Testimony, 35 Washburn L. J. 401 (1996)]

I would also like to call to the Committee's attention an essay by Professor Faigman which appeared in the **Hastings Law Journal**, Vol. 46, January 1995 entitled "Mapping the Labyrinth of Scientific Evidence".

* * *

There are a number of additional proposals which have been made for amending Rule 702 of the Federal Rules of Evidence which is currently identical to Uniform Rule 702. In the Spring, 1997, S. 79, also known as the Honesty in Evidence Act, was introduced in the United States Senate to amend Federal Rule 702 as follows:

Rule 702. Testimony by Experts

(a) In general. - If scientific, technical or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.

(b) Adequate Basis for Opinion. -

(1) Testimony in the form of an opinion by a witness that is based on scientific, technical, or medical knowledge shall be inadmissible in evidence unless the court determines that such opinion—

(A) is based on scientifically valid reasoning;

(B) is sufficiently reliable so that the probative value of evidence outweighs the dangers specified in Rule 403; and

(C) the techniques, methods, and theories used to formulate that opinion are generally accepted within the relevant scientific, medical, or technical

field.

(2) In determining whether an opinion satisfies conditions in paragraph (1), the court shall consider—

(A) whether the opinion and any theory on which it is based have been experimentally tested;

(B) whether the opinion has been published in peer-review literature; and

(C) whether the theory or techniques supporting the opinion are sufficiently reliable and valid to warrant their use as support for the proffered opinion.

(c) Expertise in the field. - Testimony in the form of an opinion by a witness that is based on scientific, technical, or medical knowledge, skill, experience, training, education, or other expertise shall be inadmissible unless the witness's knowledge, skill, experience, training, education, or other expertise lies in the particular field about which such witness is testifying.

(d) Disqualification. - Testimony by a witness who is qualified as described in subsection (a) is inadmissible in evidence if the witness is entitled to receive any compensation contingent on the legal disposition of any claim with respect to which the testimony is offered.

In March, 1997, the following H.R. 903 was introduced in the United States House of Representatives to amend Federal Rule 702:

Rule 702. Testimony by Experts

(a) In general. - If scientific, technical or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.

(b) Adequate basis for opinion. - Testimony in the form of an opinion by a witness that is based on scientific knowledge shall be inadmissible in evidence unless the court determines that such opinion -

(1) is scientifically valid and reliable;

(2) has a valid scientific connection to the fact it is offered to prove; and

(3) is sufficiently reliable so that the probative value of such

evidence outweighs the dangers specified in rule 403.

(c) Disqualification. - Testimony by a witness who is qualified as described in subdivision (a) is inadmissible in evidence if the witness is entitled to receive any compensation contingent on the legal disposition of any claim with respect to which the testimony is offered.

(d) Scope. - Subdivision (b) does not apply to criminal proceedings.

Earlier, in 1991 the Standing Committee of the Judicial Conference of the United States recommended the following amendment to Federal Rule 702.

Testimony providing scientific, technical, or other specialized information, in the form of an opinion or otherwise, may be permitted only if (1) the information is reasonably reliable and will substantially assist the trier of fact to understand the evidence or to determine a fact in issue, and (2) the witness is qualified as an expert by knowledge, skill, experience, training, or education to provide such testimony. [Ends with a notice requirement invoking the pre-amendment Civil Rule 26]

The Advisory Committee Note to the proposed Rule stated:

"while testimony from experts may be desirable if not crucial in many cases, excesses cannot be doubted and should be curtailed . . . . [and the courts should] reject testimony that is based upon premises lacking any significant support and acceptance within the scientific community.

Further, the Note stated:

In deciding whether the opinion evidence is reasonably reliable and will substantially assist the trier of fact, as well as in deciding whether the proposed witness has sufficient expertise to express such opinions, the court, as under present Rule 702, is governed by Rule 104(a).

The American University Law School Evidence Project has proposed amending Federal Rules 702 and 703 to deal with the Daubert issues as follows:

Revised Rule 702. ~~Testimony by~~ Qualification of Experts Witnesses

~~If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a~~ A witness is qualified as an expert ~~by~~ if the witness has acquired, by any means, substantial knowledge of scientific, technical, or other specialized areas ~~, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise~~.

Revised Rule 703. ~~Bases of~~ Opinion Testimony by Experts

(a) General rule. Subject to subsections (b) and (c), if expert testimony will help the trier of fact understand the evidence or determine a fact in issue, a qualified witness may testify to specialized knowledge, as well as opinions and inferences drawn therefrom, without personal knowledge of the underlying data.

(b) Principles, methodologies, and applications employed. A proponent of expert testimony must demonstrate, by a preponderance of the evidence, that the scientific, technical, or other bases of the testimony, including all principles, methodologies, and applications employed by the witness in forming opinions and inferences, produce credible results.

(c) Factual basis of opinion. The ~~facts or~~ case specific data ~~in the particular case~~ upon which an expert bases an opinion or inference may be ~~those~~ perceived by or made known to the expert at or before the hearing. ~~If of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject, the facts or data need not be admissible in evidence.~~ A proponent of expert testimony must make a demonstration of reliability, pursuant to Rule 803(5), for all otherwise inadmissible hearsay data relied upon by the expert. An expert may not rely upon data that is inadmissible.

A number of other proposals come from academia. A comment in the Buffalo Law Review, entitled Abandoning New York's "General Acceptance" Requirement: Redesigning Proposed Rule of Evidence 702(b) After Daubert v. Merrell Dow Pharmaceuticals, 43 Buff.L.Rev. 229 (1995), proposes the following codification of Daubert, applicable to scientific testimony only:

Rule 702. Testimony by Experts

(a) In general. - If scientific, technical or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.

(b) Reliable Scientific Testimony. - Testimony concerning scientific matters, or testimony concerning the result of a scientific procedure, test or experience is admissible provided: (1) the theory or principle underlying the matter, procedure, test or experiment is scientifically valid; (2) the procedure, test, or experiment is reliable and produces accurate results; and (3) the particular test, procedure or experiment was conducted in such a way as to yield an accurate result. Upon request of a party, a determination pursuant to this subdivision shall be made before the commencement of trial.

Professor Michael Graham, in the supplement to his treatise on Evidence, proposes the following amendment to Rule 702 to account for Daubert:

Rule 702. Testimony by Experts

~~If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.~~

Testimony providing scientific, technical or other specialized information, in the form of an opinion, or otherwise, may be permitted only if (1) the information is based upon adequate underlying facts, data or opinions, (2) the information is based upon an explanative theory either (a) established to have gained widespread acceptance in the particular field to which the explanative theory belongs, or (b) shown to possess particularized earmarks of trustworthiness, (3) the witness is qualified as an expert by knowledge, skill, experience, training or education to provide such information, and (4) the information will substantially assist the trier of fact to understand the evidence or to determine a fact in issue.

A comment in the Vanderbilt Law Review contains an interesting proposal to amend Rule 702 so as to establish "general acceptance" as a rebuttable presumption of reliability. See Tamarelli, Daubert v. Merrell Dow Pharmaceuticals: Pushing the Limits of Scientific Reliability, 47 Vand. L. Rev. 1175 (1994). The proposal reads as follows:

Rule 702. Testimony by Experts

~~If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.~~

A witness may testify, in the form of an opinion or otherwise, concerning scientific, technical, or other specialized information that will assist the trier of fact to understand the evidence or to determine a fact in issue, but only if (1) the information is reasonably reliable, and (2) the witness is qualified as an expert by knowledge, skill, experience, training, or education to provide that testimony.

Information normally will be considered reasonably reliable if it is based on premises, or derived from techniques, having significant support and acceptance within the relevant specialized community. A party seeking to object to a witness testifying thereto must show by a preponderance of the evidence that the information is not reasonably reliable.

Information based on premises or derived from techniques not having significant support and acceptance within the relevant specialized community normally will not be considered reasonably reliable. A party seeking to have an expert base testimony on this type of information must show by a preponderance of the evidence that

this testimony is reasonably reliable.

The Vanderbilt comment states that this proposal has the advantage of addressing Daubert directly "by establishing in the text of Rule 702 that peer review and general acceptance should be the primary indicators of reliable expert testimony." Unlike Frye, however, the proposal "would not work as an absolute bar against admitting theories that are not generally accepted. Rather, it merely would establish a presumption that these theories are not reliable enough to be admitted."

Professor Starrs participated in a project sponsored by the Science and Technology Section of the ABA, the goal of which was to fashion evidentiary rules for scientific evidence. His proposal, which can be found at 115 F.R.D. 79, was published in 1987, six years before Daubert. Nonetheless, it anticipates the decision in that case. Professor Starrs' proposal reads as follows:

Rule 702. Testimony by Experts

If scientific, technical or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise. But expert testimony based upon a scientific theory or technique is not admissible unless the court find that the theory or technique in question is scientifically valid for the purposes for which it is tendered.

Professor Starrs notes that the Rule is designedly general and open-ended: "Just as helpfulness to the jury and the qualifying of an expert are left undefined by the rule, so too is scientific validity. The sound discretion of the trial court, an oft-touted strength, is once again summoned to the task.

A threshold question to be considered by the Drafting Committee is whether amendments to Uniform Rule 702 ought to embrace completely the Daubert criteria governing the admissibility of "novel scientific evidence" to achieve uniformity among the several states on this issue.

First, there is a significant lack of uniformity among the several states concerning the standard to be applied in determining the admissibility of expert testimony concerning scientific, technical, or specialized knowledge. As of June 14, 1996, I completed preliminary research relating to the standards to which forty-two states adhere in determining the admissibility of 'novel scientific' evidence. I should emphasize that, as of the present time, I have neither updated nor engaged in any in-depth research on this issue in the several state jurisdictions. In this initial research, I only attempted to identify in a general way the approach followed in the several state jurisdictions. They appear to fall roughly into five different categories in addressing this issue. These are: (1) states still adhering to the Frye standard; (2) states adhering to a pre-Daubert standard of reliability; (3) states adopting the Daubert standard for admissibility; (4) states adhering to varying standards of admissibility; and (5) states in which the issue appears to be unsettled.

(1) The states still adhering to the Frye standard are: **Alaska**, Brodine v. State, 936 P.2d 545 (Alaska Ct. App. 1997)(admitting PCR and DNA testing), Clum v. State, No. A-5966, 1996 WL 596945 (Alaska Ct. App. Oct. 9, 1996)(admitting HGN testing), Harmon v. State, 908 P.2d 434 (Alaska Ct. App. 1995)(admitting DNA testing), Mattox v. State, 875 P.2d 763 (Alaska 1994)(excluding testimony of hypnosis) and Contreras v. State, 718 P.2d 129 (Alaska 1986); **Arizona,** State v. Hummert, 933 P.2d 1187 (Ariz. 1997)(admitting DNA testing), State v. Johnson, 922 P.2d 294 (Ariz. 1996)(admitting DNA testing), States v. Boles, 905 P.2d 572 (Ariz. Ct. App. 1995)(reversing on grounds that DNA testing was inadmissible), State v. Bogan, 905 P.2d 515 (Ariz. Ct. App. 1995)(admitting DNA testing) and State v. Bible, 858 P.2d 1152 (Ariz. 1993)(admitting DNA testing); **California,** People v. Morganti, 43 Cal. App. 4th 643 (Cal. Ct. App. 1996)(admitting agglutination inhibition testing and DNA testing), Harris Transp. Co. v. Air Resources Bd., 32 Cal. App. 4th 1472 (Cal. Ct. App. 1995)(excluding "snap-idle" testing to measure the opacity of vehicle omissions) and People v. Leahy, 882 P.2d 321 (Cal. 1994)(excluding admission of horizontal gaze nystagmus testing); **Colorado,** Tran v. Hilburn, No. 95CA1662, 1997 WL 183993 (Colo. Ct. App. April 17, 1997)(admitting VF evidence but excluding QEEG evidence), People v. Fears, No. 93CA0720, 1997 WL 454086 (Colo. Ct. App. Aug. 7, 1997)(admitting testimony of expert witness of shoe print impression), Lindsey v. People, 892 P.2d 281 (Colo. 1995)(admitting DNA testing) and People v. Lyons, 907 P.2d 708 (Colo. Ct. App. 1995)(excluding polygraph test results); **Florida,** Hadden v. State, 690 So.2d 573 (Fla. 1997)(excluding child sexual abuse accommodation syndrome), Murray v. State, 692 So.2d 157 (Fla. 1997)(excluding DNA testing), J.A.D. v. State, 695 So.2d 445 (Fla. Dist. Ct. App. 1997)(finding error in admitting post traumatic stress disorder), Berry v. CSX Transp., Inc., No. 95-3131, 1997 WL 716425 (Fla. Dist. Ct. App. Nov. 19, 1997)(reversing exclusion of testimony supporting excessive levels of organic solvents caused toxic encephalopathy), Jones v. Butterworth, No. 90,231, 1997 WL 652073 (Fla. Oct. 20, 1997)(admitting testimony that use of electric chair was cruel and unusual punishment), State v. Santiago, 679 So.2d 861 (Fla. Dist. Ct. App. 1996)(admitting polygraph test results), State v. Meador, 674 So.2d 826 (Fla. Dist. Ct. App. 1996)(excluding horizontal gaze nystagmus testing) and Flanagan v. State, 625 So.2d 827 (Fla. 1993)(excluding sex offender profile evidence); **Illinois,** People v. Miller, 670 N.E.2d 721 (Ill. 1996)(admitting DNA testing), People v. Moore, 662 N.E.2d 1215 (Ill. 1996)(admitting DNA testing), People v. Watson, 629 N.E.2d 634 (Ill. App. Ct. 1994)(admitting DNA testing), People v. Mehlberg, 618 N.E.2d 1168 (Ill. App. Ct. 1993)(admitting DNA testing) and People v. Baynes, 430 N.E.2d 1070 (Ill. 1981)(reversing on grounds that admission of polygraph test results constituted reversible error); **Kansas,** Armstrong v. City of Wichita, 907 P.2d 923 (Kan. Ct. App. 1995)(admitting multiple chemical sensitivities testing); **Maryland,** Hutton v. State, 663 A.2d 1289 (Md. 1995)(reversing on grounds that post traumatic stress disorder testimony was inadmissible) and Schultz v. State, 664 A.2d 601 (Md. Ct. Spec. App. 1995)(finding error in admitting horizontal gaze nystagmus testing because no testing of defendant to establish he consumed alcohol); **Michigan,** State v. Haywood, 530 N.W.2d 497 (Mich. Ct.

App. 1995)(declining to review applicability of standard in light of Daubert due to narrow ground upon which bloodstain evidence admitted) and People v. Davis, 72 N.W.2d 269 (Mich. 1955)(admitting testimony in adopting Frye rule in Michigan); **Minnesota,** State v. Klawitter, 518 N.W.2d 577 (Minn. 1994)(admitting horizontal gaze nystagmus testing), State v. Hodgson, 512 N.W.2d 95 (Minn. 1994)(declining to review applicability of standard in light of Daubert due to ground upon which horizontal gaze nystagmus and bitemark evidence admitted) and State v. Mack, 292 N.W.2d 764 (Minn. 1980)(excluding hypnotic testimony); **Missouri,** State v. Payne, 943 S.W.2d 338 (Mo. Ct. App. 1997)(admitting DNA testing), Callahan v. Cardinal Glennon Hosp., 863 S.W.2d 852 (Mo. 1993)(admitting testimony while declining to review whether 490.065 RSMo. Supp. 1992 supersedes Frye doctrine), State v. Davis, 814 S.W.2d 593 (Mo. 1991)(admitting DNA fingerprinting evidence) and Alsbach v. Bader, 700 S.W.2d 823 (Mo. 1985)(excluding post-hypnotic testimony); **Nebraska,** Sheridan v. Catering Management, Inc., 556 N.W.2d 110 (Neb. 1997)(admitting physician's testimony that exposure to toxic chemicals caused brain injury), State v. Case, 553 N.W.2d 173 (Neb. Ct. App. 1996)(excluding expert testimony that defendant's statement made during prepolygraph interview were not voluntary), State v. Dean, 523 N.W.2d 681 (Neb. 1994)(admitting laser trajectory testing) and State v. Carter, 524 N.W.2d 763 (Neb. 1994)(finding error in admitting DNA testing); **New Hampshire,** State v. Cavaliere, 663 A.2d 96 (N.H. 1995)(excluding expert testimony that defendant failed to meet sexual offender profile), State v. Vandebogart, 652 A.2d 671 (N.H. 1994)(admitting DNA testing) and State v. Cressey, 628 A.2d 696 (N.H. 1993)(finding error in admission of expert testimony that children were sexually abused); **New Jersey,** State v. Marcus, 683 A.2d 221 (N.J. Super. Ct. App. Div. 1996)(admitting DNA testing); **New York,** People v. Rorack, 622 N.Y.S.2d 327 (N.Y. App. Div. 1997)(finding that admission of FTIR required Frye hearing), People v. Wernick, 651 N.Y.S.2d 392 (N.Y. 1996)(affirming exclusion of expert's reference to neonaticide syndrome), People v. White, 645 N.Y.S.2d 562 (N.Y. App. Div. 1996)(admitting expert testimony on child sexual abuse), People v. Yates, 637 N.Y.S.2d 625 (N.Y. Sup. Ct. 1995)(admitting rape trauma syndrome testimony), People v. Wesley, 633 N.E.2d 451 (N.Y. 1994)(admitting DNA testing) and People v. Swamp, 604 N.Y.S.2d 341 (N.Y. App. Div. 1993)(admitting testimony identifying controlled substances); **North Dakota,** City of Fargo v. McLaughlin, 512 N.W.2d 700 (N.D. 1994)(admitting testimony upon Frye standard not applicable to determining admissibility of horizontal gaze nystagmus); **Pennsylvania,** Commonwealth v. Blasioli, 685 A.2d 151 (Pa. Super. Ct. 1996)(admitting DNA testing), Commonwealth v. Crews, 640 A.2d 395 (Pa. 1994)(admitting DNA testing) and Commonwealth v. Topa, 369 A.2d 1277 (Pa. 1977)(reversing on grounds of admission of voice print identification); **Utah,** Dikeou v. Osborn, 881 P.2d 943 (Utah Ct. App. 1994)(finding emergency room physician not qualified to testify as to standard of care applicable to cardiologist); and **Washington,** State v. Zeiler, No. 330230301, 1997 WL 88960 (Wash. Ct. App. March 3, 1997)(admitting testimony of child abuse), State v. Anderson, No. 15077-1-III, 1997 WL 530705 (Wash. Ct. App. Aug. 26, 1997)(admitting testimony of child abuse), State v. Copeland, 922 P.2d 1304 (Wash. 1996)(admitting RFLP typing), State v. Jones, 922 P.2d 806 (Wash. 1996)(admitting DNA testing), State v. Riker, 869 P.2d 43 (Wash. 1994)(excluding battered woman's syndrome testimony), but see, Reese v. Stroh, 907

P.2d 282 (Wash. 1995)(finding expert opinion as to efficacy of Prolastin therapy admissible).

In **New York**, there is a proposed New York Rule 702(a) similar to Federal Rule 702. Proposed Rule 702(b) specifically deals with scientific testimony, and reads as follows:

> Testimony concerning scientific matters, or testimony concerning the result of a scientific procedure, test or experiment is admissible provided:
>
> 1. There is general acceptance within the scientific community of the validity of the theory or principle underlying the matter, procedure, test, or experiment;
>
> 2. There is general acceptance within the relevant scientific community that the procedure, test or experiment is reliable and produces accurate results; and
>
> 3. The particular test, procedure, or experiment was conducted in such a way as to yield an accurate result.
>
> Upon request of a party, a determination pursuant to this subdivision shall be made before the commencement of trial.

In **Hawaii**, the Frye standard is combined with a reliability standard introduced in the blackletter of Rule 702 in 1992 as follows:

> If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education may testify thereto in the form of an opinion or otherwise. <u>In determining the issue of assistance to the trier of fact, the court may consider the trustworthiness and validity of the scientific technique or mode of analysis employed by the proffered expert.</u> See 1992 Haw. Sess. L. Act 191, § 2(7) at 410.

See further, State v. Maelega, 80 Haw. 172, 907 P.2d (1995)("extreme mental or emotional disturbance manslaughter") and State v. Montalbo, 73 Haw. 130, 828 P.2d 1274 (1992)(DNA evidence).

A modified Frye standard of admissibility has been applied in **Alabama** in determining the admissibility of DNA test results. See the pre-pronged test of Ex parte Perry, 586 So.2d 242 (Ala. 1991), §§ 36-18-20 through 39, Ala. Code 1975 and Turner v. State, 1996 Ala. Cr. App. LEXIS 118 and Smith v. State, 1995 Ala. Cr. App. LEXIS 413.

(2) The states adhering to a pre-Daubert standard of reliability are: **Arkansas,** Moore v. State, 915 S.W.2d 284 (Ark. 1996)(admitting DNA testing) and

Prater v. State, 820 S.W.2d 429 (Ark. 1991)(admitting DNA testing); **Delaware,** State v. Sailer, 684 A.2d 1247 (Del. Super. Ct. 1995)(excluding polygraph test results), Nelson v. State, 628 A.2d 69 (Del. 1993)(finding harmless error in admitting DNA testing) and State v. Ruthardt, 680 A.2d 349 (Del. Super. Ct. 1996)(admitting horizontal gaze nystagmus test); **Idaho,** State v. Parkinson, 909 P.2d 647 (Idaho Ct. App. 1996)(excluding psychological profile of sex offenders) and State v. Faught, 908 P.2d 566 (Idaho 1995)(admitting DNA testing); **Iowa,** Hutchinson v. Am. Family Ins., 514 N.W.2d 882 (Iowa 1994)(admitting testimony of neuropsychologist on causation); **Montana,** Barmeyer v. Montana Power Co., 657 P.2d 594 (Mont. 1983)(admitting corrosion analysis); **Oregon,** State v. Brown, 687 P.2d 751 (Or. 1984)(excluding polygraph testing); **Texas,** Fowler v. State, No. 10-96-190-CR, 1997 WL 765763 (Tex. Ct. App. Nov. 26, 1997)(finding harmless error in admitting expert testimony of family violence), Forte v. State, 935 S.W.2d 172 (Tex. Ct. App. 1996)(excluding expert testimony), Kelly v. State, 824 S.W.2d 568 (Tex. Crim. App. 1992)(admitting DNA testing); and **Wyoming,** Rivera v. State, 840 P.2d 933 (Wyo. 1992)(admitting DNA testing).

In **Indiana**, see Steward v. State, 652 N.E.2d 490 (Ind. 1995)(excluding child sexual abuse accommodation syndrome), interpreting Indiana's Rule 702(b) requiring that "[e]xpert scientific testimony is admissible only if the court is satisfied that scientific principles upon which the expert testimony rests are reliable" and Hottinger v. Trugreen Corp., 665 N.E.2d 593 (Ind. Ct. App. 1996)(admitting testimony explaining chemical injury caused by exposure to Trimec 2-4-D). See further, the Indiana version of Rule 702 which is somewhat like that of Hawaii, in that it adds a new subdivision to deal with the reliability question. But it is different in several respects as follows:

(a) If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education may testify thereto in the form of an opinion or otherwise.

(b) Expert scientific testimony is admissible only if the court is satisfied that the scientific principles upon which the expert testimony rests are reliable.

(3) The states adopting the Daubert v. Merrill Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993) standard for admissibility are: **Georgia,** Winfield v. State, No. A97A2274, 1997 WL 672438 (Ga. Ct. App. Oct. 30, 1997)(admitting DNA testing); **Indiana,** Weinberg v. Geary, No. 45A03-9612-CV-439, 1997 WL 711104 (Ind. Ct. App. 1997)(excluding expert testimony on physician's standard of care); **Iowa,** Johnson v. Knoxville Community Sch., No. 95-1686, 1997 WL 732142 (Iowa Nov. 26, 1997)(admitting testimony explaining CD trait), Williams v. Hedican, 561 N.W.2d 817 (Iowa 1997)(admitting expert testimony that administering antibody which destroys chicken pox virus to pregnant woman who has been exposed to the virus can prevent or lessen chicken pox in fetus), Hutchison v. Am. Family Mut. Ins. Co., 514 N.W.2d 882 (Iowa 1994)(admitting testimony of neuropsychologist on causation); **Kentucky,** Stringer v. Commonwealth, No. 94-SC-818-MR (Ky. Nov. 20, 1997)(admitting expert testimony

about child sexual abuse), Collins v. Commonwealth, 951 S.W.2d 569 (Ky. 1997)admitting doctor's expert testimony), Newkirk v. Commonwealth, 937 S.W.2d 690 (Ky. 1996)(excluding CSAAS testimony), Mitchell v. Commonwealth, 908 S.W.2d 100 (Ky. 1995)(admitting DNA testing) and Rowland v. Commonwealth, 901 S.W.2d 871 (Ky. 1995)(admitting hypnotically enhanced testimony); **Louisiana,** State v. Schmidt, 699 So.2d 448 (La. Ct. App. 1997)(admitting DNA testing), Williamson v. Haynes Best Western, 688 So.2d 1201 (La. Ct. App. 1997)(admitting expert testimony that prior incidents and expert testimony in support of defense theory that accident was staged), Hickman v. Exide, Inc., 679 So.2d 527 (La. Ct. App. 1996)(admitting evidence), State v. Quatrevingt, 670 So.2d 197 (La. 1996)(finding harmless error to admit DNA testing) and State v. Foret, 628 So.2d 1116 (La. 1993)(excluding child sexual abuse accommodation syndrome testimony); **Montana,** State v. Cline, 909 P.2d 1171 (Mont. 1996)(admitting expert testimony determining age of fingerprint through use of magnetic powder) and State v. Moore, 885 P.2d 457 (Mont. 1994)(admitting DNA testing); **New Mexico,** Baerwald v. Flores, 930 P.2d 816 (N.M. Ct. App. 1997)(admitting expert testimony concerning whether accident was capable of producing TMJ injury), State v. Anderson, 881 P.2d 29 (N.M. 1994)(admitting DNA testing) and State v. Alberico, 861 P.2d 192 (N.M. 1993)(admitting post traumatic stress disorder testimony); **Ohio,** State v. Anthony, No. 96APA12-1721, 1997 WL 629983 (Ohio Ct. App. Oct. 9, 1997)(affirming exclusion of polygraph test results); **Oklahoma,** Taylor v. State, 889 P.2d 319 (Okla. Crim. App. 1995)(admitting DNA testing); **Oregon,** State v. Lyons, 924 P.2d 802 (Or. 1996)(admitting DNA testing), State v. O'Key, 899 P.2d 663 (Or. 1995)(admitting horizontal gaze nystagmus testing to show defendant was intoxicated not to prove his blood alcohol content); **South Dakota,** State v. Loftus, No. 19731, 1997 WL 745059 (S.D. Dec. 3, 1997)(admitting DNA testing), State v. Moeller, 548 N.W.2d 465 (S.D. 1996)(admitting DNA testing) and State v. Hofer, 512 N.W.2d 482 (S.D. 1994)(admitting intoxilyzer testing); **Tennessee,** McDaniel v. CSX Transp., Inc., 1997 WL 594750 (Tenn. Sept. 29, 1997); **Texas,** E. I .duPont de NeMours & Co. v. Robinson, 923 S.W.2d 549 (Tex. 1995)(affirming exclusion of expert testimony on damage to pecan orchard caused by contaminated Benlate 50 DF); **Vermont,** State v. Streich, 658 A.2d 38 (Vt. 1995)(admitting DNA testing) and State v. Brooks, 643 A.2d 226 (Vt. 1993)(reversing exclusion of Datamaster infrared testing device for DUI); **West Virginia,** State v. Wyatt, 482 S.E.2d 147 (W. Va. 1996)(excluding expert testimony concerning BWS), State v. Beard, 461 S.E.2d 486 (W. Va. 1995)(excluding polygraph test results) and Wilt v. Buracker, 443 S.E.2d 196 (W. Va. 1993)(excluding hedonic damages testimony); and **Wyoming,**, Springfield v. State, 860 P.2d 435 (Wyo. 1993)(admitting DNA testing).

(4) The states adhering to varying standards of admissibility are: **Georgia,** Prickett v. State, 469 S.E.2d 371 (Ga. Ct. App. 1996)(whether the procedure or technique in question has reached a scientific stage of verifiable certainty, or in the words of Professor Irving Younger, whether the procedure rests upon the laws of nature") and Harper v. State, 292 S.E.2d 389 (Ga. 1982)(affirming exclusion of testimony explaining defendant's explanation of incident while under influence of sodium amytal); **New Jersey,** State v. Noel, 697 A.2d 157 (N.J. Super. Ct. App. Div. 1997)(admitting ICP analysis), State v. Hishon, 687 A.2d 1074 (N.J. Super. Ct. App. Div. 1996)(admitting

DNA testing), State v. Fertig, 668 A.2d 1076 (N.J. 1996)(excluding posthypnotic testimony), Landrigan v. Celotex Corp., 605 A.2d 1079 (N.J. 1992)(reversing exclusion of expert's testimony that asbestos caused colon cancer) and Rubanick v. Witco Chem., 593 A.2d 733 (N.J. 1991)(remanding case to determine if scientific theory of causation in toxic tort litigation is admissible); and **Wisconsin,** State v. Perkins, No. 95-1353-CR, 1997 WL 442085 (Wis. Ct. App. Aug. 7, 1996)(admitting testimony that victim acted consistently with initial reactions of sexual assault victims), State v. Peters, 534 N.W.2d 867 (Wis. Ct. App. 1995)(admitting DNA testing), State v. Walstad, 351 N.W.2d 469 (Wis. 1984)(admitting testimony discussing breathalyzer test ampoule), and Watson v. State, 219 N.W.2d 398 (Wis. 1974)(admitting expert testimony identifying chin hair).

(5) The states in which the issue appears to be unsettled are: **Connecticut,** State v. Esposito, 670 A.2d 301 (Conn. 1996)(equivocating on applicability of Frye and Daubert affirming exclusion of polygraph test results), State v. Hunter, 670 A.2d 1307 (Conn. 1996)(certification for appeal on issue of whether the Supreme Court should reconsider the applicability of the Frye test after excluding polygraph evidence in light of Daubert), State v. Porter, 670 A.2d 1308 (Conn. 1996)(certification for appeal on issue of whether the Supreme Court should reconsider the applicability of the Frye test after excluding polygraph evidence in light of Daubert) and State v. Tevfik, 646 A.2d 169 (Conn. 1994)(applying Frye test to reverse lower court's decision to admit DNA testing); **Massachusetts,** Commonwealth v. Rosier, 685 N.E.2d 739 (Mass. 1997)(admitting DNA testing), Commonwealth v. Lanigan, 641 N.E.2d 1342 (Mass. 1994)(applying Daubert test to admit DNA testing), but see Commonwealth v. Smith, 624 N.E.2d 604 (Mass. App. Ct. 1993)(deferring applicability of Daubert test in admitting retrograde extrapolation in determining blood alcohol level); **Ohio,** State v. Clark, 655 N.E.2d 795 (Ohio Ct. App. 1995)(admitting evidence of accident reconstruction utilizing computer assisted or electronic drafting techniques, although Daubert found inapplicable); and **Rhode Island,** In re Odell, 672 A.2d 457 (R.I. 1996)(excluding polygraph evidence).

In 1994, **Ohio** Rule 702 was amended because the previous rule, which was identical to Federal Rule 702, had "proved to be uninformative and, at times, misleading." The amended Ohio Rule 702, insofar as it applies to reliability, reads as follows:

Rule 702. Testimony by Experts

~~If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.~~

A witness may testify as an expert if all of the following apply:

(A) The witness' testimony either relates to matters beyond the knowledge or experience possessed by lay person or dispels a misconception common among lay

persons;

(B) The witness is qualified as an expert by specialized knowledge, skill, experience, training, or education regarding the subject matter of the testimony;

(C) The witness' testimony is based on reliable scientific, technical, or other specialized information. To the extent that the testimony reports the result of a procedure, test, or experiment, the testimony is reliable only if all of the following apply:

(1) The theory upon which the procedure, test, or experiment is based is objectively verifiable or is validly derived from widely accepted knowledge, facts, or principles;

(2) The design of the procedure, test, or experiment reliably implements the theory;

(3) The particular procedure, test, or experiment was conducted in a way that will yield an accurate result.

The Rule was intended to codify Ohio law, which had rejected Frye as the exclusive test for determining the admissibility of expert testimony.

Second, as the **Reporter** has observed elsewhere,

> [t]he factors delineated by the Supreme Court in the Daubert case in determining the admissibility of expert testimony under Rule 702 are not free of difficulty. First, as noted by dissenting Chief Justice Rehnquist, the majority of the Court seizes upon the words "scientific knowledge" in Rule 702 as the basis for identifying the four factors relevant to the admissibility of novel scientific evidence. Do these factors also apply to the expert seeking to testify on the basis of "technical, or other specialized knowledge" to which Rule 702 also applies? Expert testimony relating to such areas of expertise as hypnotically refreshed testimony, the battered woman's syndrome, or the child accommodation syndrome, arguably falls within "technical, or other specialized knowledge," even though in such social science areas it would be rare that such evidence could meet the testability or falsifiability and potential rate of error factors required by the Daubert case. At the same time, however, to the extent such gray areas are classified within Rule 702, the holding of the Daubert case would appear to require trial courts to evaluate such evidence for reliability-validity as a condition to admissibility.
>
> Second, suppose the proffered evidence involves only an application of a scientific theory or technique which concededly meets the minimally required four factors of admissibility enunciated in Daubert. Do applications of scientific theory or technique fall within the realm of "technical, or otherwise specialized knowledge?" Are these subject to the reliability-validity factors of Daubert, or of something else?
>
> Third, as discussed in Section 26.08, suppose the expert is

testifying on a basis of experience, such as automobile mechanics or skeletal configurations. It is doubtful that such evidence could be classified as "scientific," although it might very well qualify as "technical" or "specialized" knowledge. In such cases it seems that the Daubert factors ought not to govern admissibility, although it is by no means made clear in the decision.

In addition to the interpretive problems created by the Supreme Court's focus in the Daubert case on the language "scientific knowledge," the parties and amici also expressed concern that abandonment of the Frye "general acceptance" standard as the exclusive requirement for admissibility "will result in a 'free-for-all' in which befuddled juries are confounded by absurd and irrational pseudoscientific assertions." In rejecting this concern the majority of the Supreme Court observed that the respondent appeared "overly pessimistic about the capabilities of the jury, and of the adversary system generally." It observed:

Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.

The decision also raises the question of the extent to which trial judges are now required to fulfill the role of "amateur scientists" in ruling on the admissibility of novel scientific evidence. The dissenting Chief Justice, while conceding "that Rule 702 confides to the judge some gatekeeping responsibility in deciding questions of the admissibility of proffered expert testimony," does not believe that "it imposes on them either the obligation or the authority to become amateur scientists in order to perform that role." In contrast, the majority expressed the view that it is "confident that federal judges possess the capacity to undertake this review." This is perhaps problematic and raises the question of whether a majority of the federal judges are either "capable," or "interested," in conducting an inquiry to determine the reliability-validity of novel scientific evidence under the Daubert factors governing admissibility. The result may very well be one of the trial judge erring on the side of admissibility through the application of a "liberal" standard in determining reliability-validity without regard to the balancing process mandated by Rule 403 of the Federal Rules and placing an undue reliance on cross-examination and the presentation of contrary evidence to expose weaknesses in the proponent's expert evidence. It is one thing to conclude, as the dissenting Chief Justice Rehnquist did, "that the Frye rule did not survive the enactment of the Federal Rules of Evidence." It is another thing to devise a set of reliability-validity standards which imposes on trial judges "either the obligation or the authority to become amateur scientists in order to perform that role." It would have perhaps been wiser to remove any doubt as to the survival of the Frye rule in Rule 702 of the Federal Rules, but leave it to the task of the trial judge on a case-by-case basis to determine whether the proffered evidence would "assist the trier of fact to understand the evidence or determine a fact in issue."

A number of state courts have also adopted a reliability approach to

admissibility in lieu of the more rigid Frye standard, but with less rigidity than that developed in the Daubert case. Most notably, in interpreting Rules 401, 403 and 702 of the Maine Rules of Evidence based on the Federal Rules, the Supreme Court of Maine has adopted the relevancy-reliability versus unfair prejudice standard. It reasoned, first, the adoption of Frye standard "would be at odds with the fundamental philosophy of our Rules of Evidence, as revealed more particularly in Rules 402 and 702, generally favoring the admissibility of expert testimony whenever it is relevant and can be of assistance to the trier of fact." Second, the Court also reasoned that this more flexible approach would obviate the difficulties courts had experienced in applying the Frye standard of ascertaining the particular scientific community to which the evidence belongs and of determining its general acceptance within the defined scientific community. The Court concluded as follows:

> On the approach we adopt the presiding Justice will be allowed a latitude, which the Frye rule denies, to hold admissible in a particular case proffered evidence involving newly ascertained, or applied, scientific principles which have not yet achieved general acceptance in whatever might be thought to be the applicable scientific community, if a showing has been made which satisfies the Justice that the proffered evidence is sufficiently reliable to be held relevant.
>
> See 2 Whinery, Oklahoma Evidence, Commentary on the Law of Evidence § 2606, pp. 553-555 (1994).[Footnotes Omitted]

Another concern is whether any amendments to Uniform Rule 702 ought to deal with issues other than insuring the reliability of expert testimony. For example, the question arises whether any amendments to Rule 702 ought to address areas of procedural concern. See, for example, Taylor v. State, 889 P.2d 319 (Okl.Cr. 1995), in which the Oklahoma Court of Criminal Appeals abandoned the Frye general acceptance test and adopted the "more structured and yet flexible admissibility" standard of the Daubert case and held that DNA (deoxyribonucleic acid) match evidence obtained through RFLP (restriction fragment length polymorphism) analysis and DNA statistics calculated through standard population genetics formulas met the Daubert criteria. It then dealt with the necessity for conducting a pretrial admissibility hearing by distinguishing those cases in which scientific or technical evidence had previously been determined to be admissible under the Daubert criteria and those cases in which admissibility had not previously been determined. In the view of the Court, a pretrial hearing is not necessary in the former case although the admissibility of the evidence in such cases is still subject to attack on the "weight and credibility" of the proffered evidence through cross-examination and testimonial challenges.

If the admissibility of scientific evidence and technical evidence has not previously been adjudicated to be admissible, a pretrial hearing must be held to determine its admissibility with the court outlining the following procedure in such cases:

> The purpose of this hearing will be to determine whether such evidence is sufficiently "reliable" and "relevant" to warrant admission. This evidence may be

considered "reliable" if it is grounded in the methods and procedures of science. The "relevancy" component simply requires that scientific or technical evidence bear a valid scientific connection to the pertinent inquiry and thereby assist the trier of fact in assessing the issues. Finally, the trial court should consider whether the probative value of this evidence is substantially outweighed by the danger of unfair prejudice. This Court will independently review a trial judge's decision admitting or excluding novel scientific or technical evidence to determine whether it passes muster under Daubert.

RULE 703. [Basis of Opinion Testimony by Experts].

The facts or data in the particular case upon which an expert bases an opinion or inference may be those perceived by or made known to ~~him~~ the expert at or before the hearing. If of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject, the facts or data need not be admissible in evidence~~.~~, in order for the opinion or inference to be admissible.

Reporter's Note

This proposal for amending Rule 703 eliminates the gender-specific language in the rule. This change is technical and no change in substance is intended.

The language "in order for the opinion or inference to be admissible" drawn from the tentative amendment to Rule 703 of the Federal Rules of Evidence is added as helpful clarification to Uniform Rule 703 in this Tentative Draft #2 based upon Drafting Committee action at its meeting on October 17-19, 1997. The balance of the tentative draft of Federal Rule 703 was rejected after extensive discussion.

The tentative amendment to Rule 703 approved by the Advisory Committee on the Federal Rules of Evidence, at its meeting on April 14-15, 1997, subject to later review depending upon how the Committee might deal with Rule 702, reads as follows:

Rule 703. Bases of Opinion Testimony by Experts

The facts or data in the particular case upon which an expert bases an opinion or inference may be those perceived by or made known to the expert at or before the hearing. If of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject, the facts or data need not be admissible in evidence~~.~~, in order for the opinion or inference to be admissible. The court may apply the principles of Rule 403 to exclude, or limit, the presentation of the underlying facts or data if they are otherwise inadmissible. If the facts or data are disclosed solely to explain or support the expert's opinion or inference, the court must, on request, give a limiting instruction. Nothing in this rule restricts the presentation of underlying facts or data when offered by an adverse party.

The following states have rules identical to, or substantively the same as, existing Uniform Rule 703: **Alaska,** Alaska R. Evid. 703; **Arizona**, Ariz. R. Evid. 703; **Arkansas,** Ark. R. Evid. 703; **Colorado,** Colo. R. Evid. 703; **Delaware,** Del. R. Evid. 703; **Florida,** Fla. Stat. Ann. § 90.704 (West 1997); **Idaho,** Idaho R. Evid. 703; **Indiana,** Ind. R. Evid. 703; **Iowa**, Iowa R. Evid. 703; **Louisiana,** La. Code Evid. Ann. art. 703 (West 1997); **Maine,** Me. R. Evid. 703; **Maryland,** Md. Ann. Code of 1957 5-703; **Michigan,** Mich. R. Evid. 703; **Montana,** Mont. R. Evid. 703; **Nebraska,** Neb. R. Evid. 703; **Nevada,** Nev. Rev. Stat. § 50.285 (1995); **New Jersey,** N.J. R. Evid. 703; **New Mexico,** N.M. R. Evid. 11-703; **North Carolina,** N.C. R. Evid. 703; **North Dakota,** N.D. R. Evid. 703; **Oklahoma,** 12 Okla. St. Ann. § 2703; **Oregon,** Or. R. Evid. 703; **Rhode Island,** R.I. R. Evid. 703; **South Carolina,** S.C. R. Evid. 703; **South Dakota,** S.D. Codified Laws Ann. § 19-15-3 (1997); **Utah,** Utah R. Evid. 703; **Vermont,** Vt. R. Evid. 703; **Virginia,** Va. Code Ann. § 8.01-401.1 (Michie 1997); **Washington,** Wash. R. Evid. 703; **West Virginia,** W. Va. R. Evid. 703; and **Wisconsin,** Wis. Stat. Ann. § 907.03 (West 1997).

A few states have promulgated rules to deal with the issues relating to experts relying on otherwise inadmissible evidence under their parallel rules to Federal Rule 703 or 705. In **California**, Cal. R. Evid. 801 provides as follows:

If a witness is testifying as an expert, his testimony in the form of an opinion is limited to such an opinion as is:

(a) Related to a subject that is sufficiently beyond common experience that the opinion of an expert would assist the trier of fact; and

(b) Based on matter (including his special knowledge, skill, experience, training, and education) perceived by or personally known to the witness or made known to him at or before the hearing, whether or not admissible, that is of a type that reasonably may be relied upon by an expert in forming an opinion upon the subject to which his testimony relates, unless an expert is precluded by law from using such matter as a basis for his opinion.

In **Hawaii**, Haw. R. Evid. 703 provides as follows:

The facts or data in the particular case upon which an expert bases an opinion or inference may be those perceived by or made known to the expert at or before the hearing. If of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject, the facts or data need not be admissible in evidence. The court may, however, disallow testimony in the form of an opinion or inference if the underlying facts or data indicate lack of trustworthiness.

In **Kansas**, Kan R. Evid. 60-457 provides as follows:

The judge may require that a witness before testifying in terms of opinion or inference be first examined concerning the data upon which the opinion or inference is founded.

In **Kentucky,** Ky. R. Evid. 703 provides as follows:

(a) The facts or data in the particular case upon which an expert bases an opinion or inference may be those perceived by or made known to the expert at or before the hearing. If of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject, the facts or data need not be admissible in evidence.

(b) If determined to be trustworthy, necessary to illuminate testimony, and unprivileged, facts or data relied upon by an expert pursuant to subdivision (a) may at the discretion of the court be disclosed to the jury even though such facts or data are not admissible in evidence. Upon request the court shall admonish the jury to use such facts or data only for the purpose of evaluating the validity and probative value of the expert's opinion or inference.

(c) Nothing in this rule is intended to limit the right of an opposing party to cross-examine an expert witness or to test the basis of an expert's opinion or inference.

In **Minnesota,** Minn. R. Evid. 703 provides as follows:

(a) The facts or data in the particular case upon which an expert bases an opinion or inference may be those perceived by or made known to the expert at or before the hearing. If of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject, the facts or data need not be admissible in evidence.

(b) Underlying expert data must be independently admissible in order to be received upon direct examination; provided that when good cause is shown in civil cases and the underlying data is particularly trustworthy, the court may admit the data under this rule for the limited purpose of showing the basis for the expert's opinion. Nothing in this rule restricts admissibility of underlying expert data when inquired into on cross-examination.

In **Ohio**, Ohio R. Evid. 703 provides as follows:

The facts or data in the particular case upon which an expert bases an opinion or inference may be those perceived by him or admitted in evidence at the hearing.

In **Tennessee**, Tenn. R. Evid. 703 provides as follows:

The facts or data in the particular case upon which an expert bases an opinion or inference may be those perceived by or made known to the expert at or before the hearing. If of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject, the facts or data need not be admissible in evidence. The court shall disallow testimony in the form of an opinion or inference if the underlying facts or data indicate lack of trustworthiness.

In **Texas**, its Rule 705 deals with the issue in Subdivision (d) as follows:

(a) Disclosure of Facts or Data. The expert may testify in terms of opinion or inference and give his reasons therefore without prior disclosure of the underlying facts or data, unless the court requires otherwise. The expert may in any event disclose on direct examination, or be required to disclose on cross-examination, the underlying facts or data, subject to subparagraphs (b) through (d).

(b) Voir Dire. Prior to the expert giving his opinion or disclosing the underlying facts or data, a party against whom the opinion is offered shall, upon request, be permitted to conduct a voir dire examination directed to the underlying facts or data upon which the opinion is based. This examination shall be conducted out of the hearing of the jury.

(c) Admissibility of Opinion. If the court determines that the expert does not have a sufficient basis for his opinion, the opinion is inadmissible unless the party offering the testimony first establishes sufficient underlying facts or data.

(d) Balancing Test; Limiting Instructions. When the underlying facts or data would be inadmissible in **evidence** for any purpose other than to explain or support the expert's opinion or inference, the court shall exclude the underlying facts or data if the danger that they will be used for an improper purpose outweighs their value as explanation or support for the expert's opinion. If the facts or data are disclosed before the jury, a limiting instruction by the court shall be given upon request.

In **Texas**, Tx. R. Civ. Ev. Rule 703 provides as follows:

The facts or data in the particular case upon which an expert bases an opinion or inference may be those perceived by or reviewed by the expert at or before the hearing. If of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject, the facts or data need not be admissible in evidence.

The following state jurisdictions do not deal with the issue statutorily: **Alabama, Connecticut, Georgia, Illinois, Massachusetts, Mississippi, Missouri, New Hampshire, New York,** and **Pennsylvania.**

The state jurisdictions which have counterparts to Uniform Rule 703 uniformly apply the "reasonable reliance" standard in determining whether data not otherwise admissible in evidence may be relied upon by the expert in forming an opinion or inference on the subject. See, for example, State v. Fierro, 603 P.2d 74 (Ariz. 1979), in which the court sustained the admission of expert testimony on the subject of the Mexican Mafia, although much of the information received by the expert was hearsay, since the information relied upon was of a type reasonably relied upon by experts in formulating opinions or inferences on the subject. See further, State v. Henze, 356 N.W.2d 538 (Iowa 1984), sustaining the admissibility of an expert's opinion based upon hearsay data within medical records because the data was of a type reasonably relied upon by doctors in forming opinions. In contrast, see State v. Ballard, 855 S.W.2d 557 (Tenn. 1993), in which the court held that the trial court erred in admitting expert testimony on post-traumatic stress syndrome exhibited by victims of sexual abuse because there was no evidence that the facts underlying testimony were of the type reasonably relied upon by experts in the field. See further in this connection, Smith v. Sturm, Ruger & Co., 695 P.2d 600 (Wash. Ct. App. 1985), holding that expert testimony based upon a survey of revolver owners was not data of a type reasonably relied upon by experts in the field.

The ABA Committee on Rules of Criminal Procedure and Evidence proposed in 1987 that Federal Rule 703 be amended as follows:

(a) Bases of Opinion Testimony by Experts

The facts or data in the particular case upon which an expert bases an opinion or inference may be those perceived by or made known to the expert at or before the hearing. If of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject, the facts or data need not be admissible in evidence, in order for the opinion or inference to be admissible.

(b) Admissibility of underlying facts or data.

Except as provided hereinafter in this Rule, the facts and data underlying an expert's opinion or inference must be independently admissible in order to be received in evidence on behalf of the party offering the expert, and the expert's reliance on facts or data that are not independently admissible does not render those facts or data admissible in that party's behalf.

(1) Exception. Facts or data underlying an expert's opinion or inference that are not independently admissible may be admitted in the discretion of the court on behalf of the party offering the expert, if they are trustworthy, necessary to illuminate the testimony, and not privileged. In such instances, upon request, their use ordinarily shall

be confined to showing the expert's basis.

(2) Discretion whether or not independently admissible. Whether underlying facts and data are independently admissible or not, the mere fact that the expert witness has relied upon them does not alone require the court to receive them in evidence on request of the party offering the expert.

(3) Opposing party unrestricted. Nothing in this Rule restricts admissibility of an expert's basis when offered by a party opposing the expert.

Finally, Professor Carlson has recommended that Federal Rule 703 be amended as follows:

(a) The facts or data in the particular case upon which an expert bases an opinion or inference may be those perceived by or made known to the expert at or before the hearing. If of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject, the facts or data need not be admissible in evidence.

(b) Nothing in this rule shall require the court to permit the introduction of facts or data into evidence on grounds that the expert relied on them. However, they may be received into evidence when they meet the requirements necessary for admissibility prescribed in other parts of these rules.

See Carlson, Experts as Hearsay Conduits: Confrontation Abuses in Opinion Testimony, 76 Minn.L.Rev. 859 (1992).

See the Reporter's Note to Rule 702 for the proposed amendment of Rule 703 of the Federal Rules of Evidence. See further, Rice, Paul R., The Evidence Project, Proposed Revisions to the Federal Rules of Evidence, 171 F.R.D. 330, 579 (1997).

RULE 704. [Opinion on Ultimate Issue].

Testimony in the form of an opinion or inference otherwise admissible is not objectionable because it embraces an ultimate issue to be decided by the trier of fact.

Reporter's Note

There are no proposals at the present time for amending Rule 704.

Rule 704 of the Federal Rules of Evidence was amended in 1984 to include a Subdivision (b) as follows:

(b) No expert witness testifying with respect to the mental state or condition of a defendant in a criminal case may state an opinion or inference as to whether the defendant did or did not have the mental state or condition constituting an element of the crime charged or of a defense thereto. Such ultimate issues are matters for the trier of fact alone.

(As amended Pub.L. 998-473, Title II, § 406, Oct. 12, 1984, 98 Stat. 2067).

The Evidence Project proposes revising Rule 704 of the Federal Rules of Evidence as follows:

Revised Rule 704. Opinion on Ultimate Issue

~~(a) Except as provided in subdivision (b), t~~ Testimony in the form of an opinion or inference otherwise admissible is not objectionable because it embraces an ultimate issue of fact or application of the controlling legal principles to the facts ~~to be decided by the trier of fact~~.

~~(b) No expert witness testifying with respect to the mental state or condition of a defendant in a criminal case may state an opinion or inference as to whether the defendant did or did not have the mental state or condition constituting an element of the crime charged or of a defense thereto. Such ultimate issues are matters for the trier of fact alone.~~

See Rice, Paul R., The Evidence Project, Proposed Revisions to the Federal Rules of Evidence, 171 F.R.D. 330, 588 (1997).

RULE 705. [Disclosure of Facts or Data Underlying Expert Opinion].

The expert may testify in terms of opinion or inference and give ~~his~~ reasons therefor without prior disclosure of the underlying facts or data, unless the court requires otherwise. The expert may in any event be required to disclose the underlying facts or data on cross-examination.

Reporter's Note

This proposal for amending Rule 705 eliminates the gender-specific language in Rule 705. This change is technical and no change in substance is intended.

The Evidence Project proposes revising Rule 705 of the Federal Rules of Evidence as follows:

Revised Rule 705. Disclosure of Facts or Data Underlying Expert Opinion

~~The~~ Unless testifying in response to a hypothetical question, an expert, ~~may~~ testifying in terms of opinion or inference, ~~and give reasons therefore without first testifying~~ must, on direct examination, testify to the ~~underlying facts or~~ case specific data that serves as the basis for ~~the~~ any opinion or inference offered by the expert, ~~unless the court requires otherwise. The expert may in any event be required to disclose the underlying facts or data on cross-examination~~.

See Rice, Paul R., The Evidence Project, Proposed Revisions to the Federal Rules of Evidence, 171 F.R.D. 330, 594 (1997).

RULE 706. [Court Appointed Experts Witnesses]

(a) Appointment. The court, on motion of any party or its own motion, may enter an order to show cause why expert witnesses should not be appointed, and may request the parties to submit nominations. The court may appoint any expert witnesses agreed upon by the parties, and may appoint expert witnesses of its own selection. An expert witness shall not be appointed by the court unless ~~he~~ the witness consents to act. A witness so appointed shall be informed of ~~his~~ the witness' duties by the court in writing, a copy of which shall be filed with the clerk, or at a conference in which the parties shall have opportunity to participate. A witness so appointed shall advise the parties of ~~his~~ the witness' findings, if any; ~~his~~ the witness' deposition may be taken by any party; and ~~he~~ the witness may be called to testify by the court or any party. ~~He~~ The witness shall be subject to cross-examination by each party, including a party calling ~~him as a~~ the witness.

(b) Compensation. Expert witnesses so appointed are entitled to reasonable compensation in whatever sum the court may allow. The compensation thus fixed is payable from funds which may be provided by law in criminal cases and civil actions and proceedings involving just compensation for the taking of property. In other civil actions and proceedings the compensation shall be paid by the parties in such proportion and at such time as the court directs, and thereafter charged in like manner as other costs.

(c) Disclosure of appointment. In the exercise of its discretion, the court may authorize disclosure to the jury of the fact that the court appointed the expert

witness.

(d) Parties' experts of own selection. Nothing in this rule limits the parties in calling expert witnesses of their own selection.

Reporter's Note

This proposal for amending Rule 706 eliminates the gender-specific language in Rule 706. The change is technical and no change in substance is intended.

Upon recommendation of the Drafting Committee at its meeting on October 17-19, 1997, the caption to Rule 706 has been changed to "Court Appointed Expert Witnesses" which more nearly reflects the testimonial functions performed by the expert pursuant to Rule 706. Rule 706 thus applies only to expert witnesses and not to expert consultants appointed by the trial judge in performing the gatekeeping function in admitting scientific, technical or specialized knowledge under Uniform Rule 702.