Module 2C
Forensic Science Legal Aspects

Forensic Science Teacher Professional Development
Unit 3.14: Introduction to Forensic Evidence in the CJ System

- One important factor in understanding the usefulness of forensic evidence is the examination of the admissibility of evidence, particularly the use of expert witness testimony in court.

- When evidence either supporting or refuting the involvement of a defendant is offered by the prosecutor or defense, that evidence is held to strict legal standards of admissibility.

- The courts have increasingly expanded the types of behavioral and forensic evidence which are admissible in response to the rapidly changing advances in scientific knowledge.
Historically, judges have deferred to expert witnesses in their decisions to admit or exclude certain types of evidence and testimony.

However, their collective deferral to the experts has established precedent for an increasing array of types of evidence which is admissible in court.

The adversarial nature of the American criminal justice system creates special challenges in understanding the standards for admissibility of behavioral and forensic evidence in court.
Unit 3.14: Introduction to Forensic Evidence in the CJ System

- Under the common law system in the United States, the prior decisions by the courts establish precedent.

- The decisions which establish precedent extend to any lower courts as well.

- Precedent is only binding in the courts within the jurisdiction of the court issuing the decision.

- Historically the principle of *stare decicis* governs those opinions.

- *Stare Decicis* is Latin for “let the decision stand.”

- Precedent can be set aside and overruled by a legislative act if the constitution allows.

- Unless precedent is expressly overruled by higher courts, the precedent will stand as good law.
Unit 3.14: Introduction to Forensic Evidence in the CJ System

The laws of evidence

1) direct what a jury can see, hear, or decide during a trial;

2) govern what type of information can be presented to a jury as well as what types of physical and behavioral evidence may be admitted into evidence.

- The purpose of evidence law is to keep a jury from hearing or seeing improper evidence.
- Evidence is anything that can logically prove or disprove a fact at issue in a case.
- The combination of evidence provided in a case should, at least in theory, prove the guilt or innocence of the accused.
- Testimonial evidence is evidence that is presented to the jury in oral form.
Even evidence which may be relevant to a case is not necessarily admissible under the laws that govern evidence.

The laws of admissibility protect the trier of fact, whether the judge, or a jury, from hearing unreliable or untrustworthy evidence against a defendant.

In order for evidence to be admissible, it must be both relevant and material.

Relevance means that the evidence must have probative value in proving or disproving guilt or innocence.

Evidence must also be material, which means it must be significant and important.
Concepts of Evidence Law

- On face value, evidence must be able to withstand the burden of moving forward on a particular issue in a case.

- This is known as a *prima facie* showing.

- The burden of production is the obligation of each party in a trial to produce evidence which can make a *prima facie* showing on issues being considered.

- The *burden of proof* in a criminal case rests on the prosecution. It is up to the prosecution to convince the trier of fact about the issues of the case.

- The standard of evidence in a criminal trial is known as *proof beyond a reasonable doubt*. This standard is usually governed by statutory provisions which are found in each state’s penal code.
Unit 3.14: Introduction to Forensic Evidence in the CJ System

Concepts of Evidence Law, continued

- The *preponderance of the evidence* in a case is the standard of proof held in civil cases.

- *Preponderance of the evidence* is a lesser standard than *burden of proof* and means that the plaintiff must prove the case slightly more than not.

- In some civil cases, a slightly higher standard is used, *clear and convincing evidence*. This standard lies somewhere between *preponderance of the evidence* and *proof beyond a reasonable doubt*. 
Unit 3.15: Expert Witness Testimony

- Expert witnesses play a prominent role in both civil and criminal litigation.

- “Historically, the law has defined the role of the expert as that of impartial educator asked to assist the trier of fact so that the latter can decide questions which may depend on specialized knowledge.”

- It is a well-known fact that some experts testify according to which side is paying them or lack the qualifications to testify on a particular matter.
One factor in the lack of consensus on the admissibility of scientific evidence in litigation is that the courts do not specify in detail what an expert is, creating confusion in determining whether an individual’s testimony would be considered that of an expert.

Rule 702 of the Federal Rules of Evidence states that anyone may qualify as an expert by virtue of their “knowledge, skill, experience, training, or education.”

However, before an expert witness testifies, the party introducing the evidence must show that the subject matter is appropriate for expert testimony.

Not all testimony would qualify as “expert.” Traditionally, the courts have excluded expert witness testimony about matters which would fall within the common knowledge of the jurors.
Unit 3.16: Admissibility of Behavioral, Scientific, and Technical Evidence

General Admissibility

- There are clear rules for the admissibility of scientific evidence, but the rules for social science and psychological evidence are not as clearly delineated.

- In *Brown v. Board of Education*, the Supreme Court allowed one of the first documented uses of social science evidence. However, the use of such testimony is controversial and the standards for admissibility vary.

- In order to be admissible, evidence is generally weighed by the court according to a two-pronged test.

- First, evidence is only relevant if it makes a fact in question more or less probable.

Unit 3.16: Admissibility of Behavioral, Scientific, and Technical Evidence

General Admissibility, continued

- Rule 401 defines “relevant evidence” as evidence that has “any tendency to make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence.”

- Second, evidence is admissible only if the relevance of the evidence is greater than its potential prejudicial nature.

- Rule 403 of the Federal Rules of Evidence specifically states that evidence shall be excluded “if its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury, or by considerations of undue delay, waste of time, or needless presentation of cumulative evidence.”
Unit 3.16: Admissibility of Behavioral, Scientific, and Technical Evidence

The Frye Standard

- Historically, *Frye v. United States* set out requirements for the admissibility of expert testimony.

- The opinions of experts are admissible into evidence in cases in which the matter of inquiry is such that inexperienced persons are unlikely to prove capable of forming a correct judgment on the evidence because the subject-matter of the evidence, "... partakes of a science, art, or trade as to require a previous habit or experience or study in it, in order to acquire a knowledge of it. When the question involved does not lie within the range of common experience or common knowledge, but requires special experience or special knowledge, then the opinions of witnesses skilled in that particular science, art, or trade to which the question relates are admissible in evidence."

- Essentially, *Frye* set out the “general acceptance” test, in which the court focused on whether the theory or technique used by the expert was generally accepted in the related scientific community.

*Frye v. United States, 293 F. 1013 (D.C. Cir. 1923).*
While the Frye standard is still widely used, a challenge to Frye arose when the states adopted the Federal Rules of Evidence, which established a differing standard for the admission of expert testimony.

Rule 702 of the Federal Rules of Evidence provides that “[i]f 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.”
The Frye Standard, continued

- The *Frye* “general acceptance” standard conflicts with the Federal Rules of Evidence “helpfulness” test.


- Some courts still employ the *Frye* general acceptance test because the Court asserts that “scientific” evidence takes on an innate trustworthiness which may mislead the jury.

- The Court intentionally left the admissibility of evidence determination up to the trial court rather than establishing a bright-line rule.

- In order to be relevant, evidence must be reliable.
Unit 3.16: Admissibility of Behavioral, Scientific, and Technical Evidence

The Daubert Principle

- In an attempt to clarify the debate on the admissibility of expert witness testimony, the Supreme Court set a standard for scientific expert testimony in federal courts in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*

- In *Daubert*, the Court held that the *Frye* standard was superseded by Rule 702 of the Federal Rules of Evidence.

- The *Daubert* court explicitly stated that “[n]othing in the text of this Rule establishes ‘general acceptance’ as an absolute prerequisite to admissibility.”

- The Court referred to Rule 702’s allowance of testimony as the “helpfulness” test.

- In order to be helpful, according to the *Daubert* principle, expert witness testimony must be both relevant and reliable.
The Daubert Principle, continued

- Rule 702 of the Federal Rules of Evidence provides an alternative standard for the admission of expert testimony.

- The rule focuses on whether the scientific, technical, or specialized evidence will "assist the trier of fact" and requires that the person giving such evidence be qualified as an expert through "knowledge, skill, experience, training, or education."

- Rule 702 does not address the essential general acceptability or reliability of the evidence and as a result, lower courts have been conflicted as to whether Rule 702 lowered the Frye standard.

The Daubert Principle, continued

- In *Daubert*, the Court listed two factors courts must consider prior to admitting scientific expert testimony based on Rule 702.

- Some factors to be considered are whether the expert is proposing to testify to scientific knowledge and whether that knowledge will assist the trier of fact to understand or determine a fact in issue.

- In *Daubert*, the Supreme Court held that the “scientific knowledge” requirement created an evidentiary reliability standard that required the expert’s inference or assertion to arise from the scientific method.

- In addition, the Supreme Court interpreted the language “assist the trier of fact to understand the evidence or to determine a fact in issue” as a relevancy requirement.

- The Court determined that in order to be relevant, the evidence must relate to the case and provide a valid scientific connection to the pertinent inquiry.
Unit 3.16: Admissibility of Behavioral, Scientific, and Technical Evidence

The Daubert Principle, continued
Essentially, the Daubert Court set out the several considerations in evidence admissibility.

1) The Daubert standard does not only apply to unconventional evidence.

2) Judges should question whether the theory or technique in question can be tested and has been tested.

3) Judges should consider whether the theory or technique has been subjected to peer review and publication.

4) The error rate or potential rate of error should be known.

5) Evidence reliability assessment does not require, but does permit, explicit identification of a relevant scientific community and a determination of a particular degree of acceptance within that community.
The Daubert Principle, continued

- The *Daubert* court stated that Rule 703 of the Federal Rules of Evidence provides that expert opinions based on otherwise inadmissible hearsay are to be admitted only if the facts or data are “of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject.”

- Courts are allowed at their discretion to obtain an expert of their own.

- Finally, the court states that Rule 403 of the Federal Rules of Evidence permits the exclusion of relevant evidence if the probative value substantially outweighs the danger of unfair prejudice, confusion of the issues, or misleading the jury.
Unit 3.16: Admissibility of Behavioral, Scientific, and Technical Evidence

The Daubert Principle, continued

- The _Daubert_ court relies on the capabilities of juries and the traditional adversarial process of cross-examination as a means to counter questionable, but admissible, evidence and avoid a “free for all” in which “befuddled juries are confounded by absurd and irrational pseudoscientific assertions.”

- The Court concludes by reiterating that General acceptance is not a necessary precondition to the admissibility of scientific evidence under the Federal Rules of Evidence, but the Rules of Evidence-especially Rule 702--do assign to the trial judge the task of ensuring that an expert’s testimony both rests on a reliable foundation and is relevant to the task at hand. Pertinent evidence based on scientifically valid principles will satisfy those demands.
The Daubert Principle, continued

*Daubert* opened the door for novel types of scientific testimony while requiring the trial judge to serve as the “gatekeeper.”

The standards of admissibility were purposely left open to interpretation by the Court. The *Daubert* standard was later clarified by two additional decisions. Together, the three cases are commonly known as the “*Daubert* trilogy.”

1) In *General Electric Co. v. Joiner*, the Supreme Court held that appellate courts must defer to lower trial court decisions regarding the admissibility of expert witness testimony unless the court decisions are glaringly wrong.

2) In *Kuhmo Tire Co. v. Carmichael*, the Supreme Court held that a judge’s “gate keeping” function, which is identified in *Daubert*, applies to all expert witness testimony, including non-scientific testimony.
Unit 3.16: Admissibility of Behavioral, Scientific, and Technical Evidence

The Daubert Principle, continued

- Finally, in 2000, the Supreme Court approved amendments to the Federal Rules of Evidence which related to opinion evidence and expert witness testimony to conform to the *Daubert* trilogy.

- This amendment codified the Supreme Court’s decisions in the *Daubert* trilogy. Rule 702 now states that a witness may only testify if
  “1) the testimony is based upon sufficient facts or data;
  2) the testimony is the product of reliable principles and methods; and
  3) the witness has applied the principles and methods reliably to the facts of the case.”

However, the Court’s action still allows the trial courts to act as gatekeepers in selecting the criteria which distinguishes between reliable and non-reliable expert testimony.
Admitting Non-Scientific Evidence

- Courts routinely recognized the need for psychological testimony when the issues involved sanity and competency to stand trial.

- When the Supreme Court crafted the *Daubert* principle, there was debate about whether *Daubert* was applicable to psychological evidence.

- In fact, some critics of psychological and social science evidence claim that any evidence of that type is not science and, therefore, *Daubert* is not applicable.

- Others assert that the *Daubert* principle is applicable because that type of evidence has a strong scientific foundation.

- Despite the lack of consensus about the admissibility of certain types of psychological and social science evidence, the Supreme Court has yet to rule conclusively on the issue.
Unit 3.16: Admissibility of Behavioral, Scientific, and Technical Evidence

Conclusion

- Because of the different courts’ approaches to the legal admissibility of expert witness testimony, it is possible that in the near future the Supreme Court will be asked to clarify the standards of admissibility.

- It is also likely that the Court will stop short of crafting a bright-line rule on admissibility of testimony involving social and behavioral sciences in particular.

- In the meantime, investigators and prosecutors alike will continue to seek out additional ways to link offenders to the crime through different forms of evidence.
End of Module 2

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