

**PRESENTED AT**

**2023 Robert O. Dawson Conference on Criminal Appeals**

May 10-12, 2023  
Austin, Texas

**Forensic Science on Appeal**

**Carson Guy**

Author Contact Information:  
Carson Guy  
Texas Court of Criminal Appeals  
Austin, Texas

[carson.guy@txcourts.gov](mailto:carson.guy@txcourts.gov)  
512.463.1575

Carson Guy  
Texas Court of Criminal Appeals  
201 W. 14th Street, Room 106  
Austin, Texas 78701

phone: (512) 463-1575  
[carson.guy@txcourts.gov](mailto:carson.guy@txcourts.gov)

## BACKGROUND, EDUCATION AND PRACTICE

Carson Guy worked at the Texas Court of Criminal Appeals as a Briefing Attorney in 2011 for Judge Barbara Hervey, and he returned to the Court in 2013, as Judge Hervey's Research Attorney. Carson earned his Bachelor of Arts from Texas State University in 2007 and his Juris Doctor from St. Mary's School of Law in 2011.

He was a member of the Texas Bar Journal Board of Editors from 2016 to 2019, and he still serves as an advisory member. He is also a member of the Williamson County Inn of Court and has been a member on the American Inns of Court Membership Committee since 2018. He has written and coauthored numerous articles, including in the Texas Bar Journal and in the SMU Annual Texas Survey.

Carson lives in Lampasas with his wife, Jessica, his two children, Stratton and Claire, and their Sheepadoodle, Walter.

## TABLE OF CONTENTS

I. DISCLAIMER.....	4
II. INTRODUCTION .....	4
III. Preservation of FORENSIC Science Evidentiary CLAIMS.....	4
IV. RULE 702 .....	4
A. Qualification.....	5
1. Sufficient Background.....	5
2. The “Fit” Requirement .....	5
B. Reliability & Relevance .....	6
1. Reliability .....	6
a. “Hard” Science .....	7
b. “Soft” Science .....	7
2. Relevance .....	7
V. Examples of Hard Sciences and Soft Sciences .....	8
VI. The Trial Court’s Role as Gatekeeper .....	8
VII. Other Considerations .....	8

## I. DISCLAIMER

The views expressed in this paper are those of the author alone. They are not endorsed by the Texas Court of Criminal Appeals (CCA). This paper is for informational purposes.

## II. INTRODUCTION

Forensic science has been firmly entrenched in the legal system for a long time. Even Sherlock Holmes used his powers of deduction and knowledge of forensic science to solve crimes starting 1887. Now people expect a witness (or multiple witnesses) wearing a white coat to testify about exactly what happened, like a sports commentator breaking down each play in a game. Extra points for the expert who uses the most jargon. But most people in the legal field know that usually is not how things work. Well, the white coat part, at any rate.

Forensic science is a lot more complicated than it used to be. Sherlock Holmes did not have to worry about the rules of evidence. You do. Forensic science has shifted from mostly non-scientific methods primarily developed by police to focusing on rigorous empirical testing using the scientific method and sound methodologies.

## III. PRESERVATION OF FORENSIC SCIENCE EVIDENTIARY CLAIMS

Direct appeal points of error and claims on PDR are often limited to what is in the record.<sup>1</sup> And normal error-preservation rules apply to objections to expert witnesses under Rule

---

<sup>1</sup> See *Wilson v. State*, 977 S.W.2d 379, 380 (Tex. Crim. App. 1998) (“[I]n general, all but the most fundamental evidentiary and procedural rules (or ‘rights’) are forfeited if not asserted at or before trial.”) (citing *Marin v. State*, 851 S.W.2d 275, 278-80 (Tex. Crim. App. 1993)); *Pena v. State*, 285 S.W.3d 459, 464 (Tex. Crim. App. 2009) (“Whether a party’s particular complaint is preserved depends on whether the complaint on appeal comports with the complaint made at trial.”).

702 Article VII of the Texas Rules of Evidence.<sup>2</sup> This means Rule 33.1 of the Texas Rules of Appellate Procedure applies.<sup>3</sup>

## IV. RULE 702

The foundation for admission of expert testimony is Rule 702. Rule 702 of the Texas Rules of Evidence states,<sup>4</sup>

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if the expert’s scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue.

Expert testimony is not admissible under Rule 702 unless:<sup>5</sup>

(1) “the witness qualifies as an expert by reason of his knowledge, skill, experience, training, or education;”

---

<sup>2</sup> See *id.*

<sup>3</sup> TEX. R. APP. P. 33.1. In *Lankston v. State*, the Court summarized Rule 33.1,

Straightforward communication in plain English will always suffice.... [A]ll a party has to do to avoid the forfeiture of a complaint on appeal is to let the trial judge know what he wants, why he thinks himself entitled to it, and to do so clearly enough for the judge to understand him at a time when the trial court is in a proper position to do something about it.

*Lankston*, 827 S.W.2d 907 (Tex. Crim. App. 1992).

<sup>4</sup> TEX. R. EVID. 702.

<sup>5</sup> *Alvarado v. State*, 912 S.W.2d 199, 215–16 (Tex. Crim. App. 1995).

(2) “the subject matter of the testimony is an appropriate one for expert testimony;” and

(3) “admitting the expert testimony will actually assist the factfinder in deciding the case.”

“These conditions are commonly referred to as (1) qualification, (2) reliability, and (3) relevance.”<sup>6</sup>

“A trial judge’s decision to admit expert testimony is reviewed for an abuse of discretion and may not be reversed unless that ruling fell outside the zone of reasonable disagreement.”<sup>7</sup>

### A. Qualification

A witness can be qualified as an expert based on the witness’s knowledge, skill, experience, training, education, or a combination thereof.<sup>8</sup>

Whether a witness can be qualified as an expert requires a two-step inquiry.<sup>9</sup> The proponent of an expert evidence must show that the proffered expert (1) has “a sufficient background in a particular field” and that their (2) background goes “to the matter on which the witness is to give an opinion.”<sup>10</sup>

#### 1. Sufficient Background

---

<sup>6</sup> *Davis v. State*, 329 S.W.3d 798, 813 (Tex. Crim. App. 2010) (citing *Vela v. State*, 209 S.W.3d 128, 131 (Tex. Crim. App. 2006)).

<sup>7</sup> *Blasdell v. State*, 470 S.W.3d 59, 62 (Tex. Crim. App. 2015).

<sup>8</sup> TEX. R. EVID. 702; *see Holloway v. State*, 613 S.W.2d 497, 501 (Tex. Crim. App. 1981).

<sup>9</sup> *Vela*, 209 S.W.3d at 131.

<sup>10</sup> *Id.*

Appellate courts may consider several factors when deciding whether a trial court abused its discretion in ruling on an expert’s qualifications: (1) whether the field of expertise is complex, (2) how conclusive the expert’s opinion is, and (3) how central the area of expertise is to the resolution of the lawsuit.<sup>11</sup>

“The degree of education, training, or experience that a witness should have before he can qualify as an expert is directly related to the complexity of the field about which he proposes to testify.”<sup>12</sup> “If the expert evidence is close to the jury’s common understanding, the witness’s qualifications are less important than when the evidence is well outside the jury’s own experience.”<sup>13</sup>

The importance of an expert’s expertise increases with how dispositive the expertise is to resolving the disputed issues<sup>14</sup> and how conclusive the expert’s opinion is.<sup>15</sup> For example, “[i]f DNA is the only thing tying the defendant to the crime, the reliability of the expertise and the witness’s qualifications to give his opinion are more crucial than if eyewitnesses and a confession also connect the defendant to the crime.”<sup>16</sup> The Court of Criminal Appeals has also said that DNA profiling “requires a much higher degree of scientific expertise than testimony ‘that the defendant’s tennis shoe could have made the bloody shoe print found on a piece of paper in the victim’s apartment.’”<sup>12</sup>

#### 2. The “Fit” Requirement

---

<sup>11</sup> *Rodgers v. State*, 205 S.W.3d 525, 528 (Tex. Crim. App. 2006).

<sup>12</sup> *Id.*

<sup>13</sup> *Id.*

<sup>14</sup> *Id.*

<sup>15</sup> *Id.*

<sup>16</sup> *Id.*

Find the full text of this and thousands of other resources from leading experts in dozens of legal practice areas in the [UT Law CLE eLibrary \(utcle.org/elibrary\)](https://utcle.org/elibrary)

Title search: Forensic Science on Appeal

Also available as part of the eCourse

[2023 Robert O. Dawson eConference on Criminal Appeals](#)

First appeared as part of the conference materials for the  
2023 Robert O. Dawson Conference on Criminal Appeals session  
"Forensic Evidence and Appeals"