

Are Non-Scientists Qualified To Be Blood Spatter Analysis Professionals?

By Dina Cirigliano

Plaza College, Forest Hills, New York

Blood spatter analysis by forensic science experts began one-hundred-twenty-eight years ago and is therefore, by no means, a new specialization. The maturity of this concentration of forensic science has increased over time. That is quite evident with the professionals' ability to establish categories of blood spatter as passive stains (droplets, flows, and pools), transfer stains (wipes, swipes, footprints, shoeprints, handprints, glove prints, and body drag marks), and impact stains (cast-off and arterial gush), their ability to identify the bloodshed event (sharp-force injury, blunt-force injury, or gunshot injury), their ability to determine the trajectory of a projectile, their ability to establish the locations and positions of victims and offenders, their ability to bring forth chemiluminescence with a mere spray of aerosol Luminol, and their ability to recreate crime scenes by utilizing simulation software. While blood spatter analysis has indeed developed and expanded with the passage of time, there have been notable setbacks in the field as of late. These setbacks come in the form of questionable credentials of those permitted to offer expert testimony regarding blood spatter in courts of law. Particularly in the last half decade, blood spatter analysis has come under the inspection of some watchful eyes, as the qualifications of supposed experts are more and more often being viewed as subpar. The purpose of this paper is to establish whether or not non-medical doctor and non-scientific researcher blood spatter analysis professionals deserve the scrutiny they have been facing for the past five years.

The first question that must be asked is: What qualifies a professional as an expert who is suitable to offer testimony as such in a court of law? This was answered in a 2023 publication by the Indiana University – Bloomington's Maurer School of Law which stated that "a witness may be qualified as an expert based on knowledge, skill, experience, training, or education" (Tanford,

2023). Unfortunately, the publication went on to show that there are no set minimal standards with regard to the quantity and quality of the very knowledge, skill, experience, training, or education referred to. Because of this, with regard to quantity, an individual who has acquired a very limited amount of information on blood spatter, has had a very brief involvement with blood spatter, has had taken part in a negligible number of blood spatter-related drills, and has earned no degree in medicine, biology or physics still qualifies as a professional who can offer expert testimony with regard to blood spatter analysis before a jury. With regard to quality, an individual with the poorest knowledge, most imperfect skill, lowest-valued experience, insufficient training, and an education that is mediocre at best still qualifies as an expert witness who can testify to blood spatter analysis before a jury. “The standard is a minimal one. The witness need not be the best available” (Tanford, 2023).

The lack of established minimal standards for blood spatter analysis experts has proven to be detrimental to the justice system in some very high-stakes homicide cases that went to trial in criminal courts across America. One such case occurred in Clifton, Texas in 1985. Mr. Joe Bryan, who was employed as the principal of a local high school, was verified to be one-hundred-twenty miles away at an education conference in Austin, Texas when his wife, fourth grade teacher Mickey Bryan, was murdered in the couple’s home (Innocence Project Texas, 2023). Ballistics determined that Mrs. Bryan was shot with a .357 caliber revolver a total of four times with what are known as snake shot rounds; These are plastic caps packed with minute lead pellets (Taudt, et. al., 2021). Although there was no record of domestic violence, no apparent monetary motive (life insurance policies, etc.), and the revolver was never recovered after a full investigation, the jury convicted Mr. Bryan of first-degree murder based mainly on the “expert”

testimony presented at trial. The prosecution's "expert" witness, presented to the jury as a bloodstain-pattern analyst, was in reality a Texas Ranger named Robert Thorman. He was considered an expert because he took a mere 40-hour class on blood spatter and no minimal standards for expertise had been established. Ranger Thorman was neither a research scientist nor a medical doctor. He was a law enforcement officer, who happened to have signed up for a week-long course. His testimony led to Mr. Bryan being sentenced to the maximum penalty of ninety-nine years imprisonment in April of 1986 (Taudt, et. al., 2021).

Thankfully, five years ago in the year 2018, the Innocence Project Texas offered new-fangled evidence, that consisted of not only declarations about a likely suspect, but also a signed affidavit from Ranger Thorman revealing, "some of my techniques and methodology were incorrect. Therefore, some of my testimony was not correct... in no way did I lie in my report or testimony, as I was doing what I thought was correct as a result of my training at the time" (Innocence Project Texas, 2023). While the court failed to grant a new trial, the Innocence Project Texas "secured parole attorneys to assist with Joe's parole hearing in March of 2020. Numerous character witnesses, including author John Grisham, provided statements to the board of pardons and paroles. Joe was granted parole and released on March 31, more than 30 years after being wrongfully convicted for his wife's murder" (Innocence Project Texas, 2023). While over three decades of time lost can never be replaced in any way, shape, or form, it was important to all parties involved that Mr. Bryan be exonerated. So, two years ago in the year 2021, a petition was filed with the Supreme Court to review the case of Mr. Bryan based on actual innocence. Unfortunately, the Supreme Court refused the petition and all of Mr. Bryan's legal paths have now been fully exhausted (Innocence Project Texas, 2023). He will never be

officially absolved of fault, blame, or wrongdoing. The State of Texas v. Bryan is only one of many cases tried that resulted in wrongful conviction and decades of hard time served unjustly due to testimony given by unknowledgeable, unskilled, inexperienced, untrained, uneducated “experts”. If minimal standards with regard to the quantity and quality of knowledge, skill, experience, training, and education were not only set, but set as high as possible, Mr. Bryan and others like him would not have to endure the travesty of justice that they have.

The duration of the forty-hour blood spatter analysis course reveals low quantity of training, but it was an article published by Crime Legal News that identified the week-long course as being of extremely poor quality as well. A New York Times Magazine journalist, Pamela Colloff, reported the following after having taken the course: “When the instructor began teaching how to trace the trajectory of blood to its source, he showed how a scientific foundation is dismissed in such trainings: ‘We’re not really going to focus on the math and physics; it just kind of bogs things down.’ This is an alarming disregard for scientific competency and accountability.” (Accurso, 2022). How could investigators not focus on math and science? There is no instance more crucial than when a person’s life and freedom are on the line than this. Many law enforcement officers believe that the 40-hour course is enough. “Some police officers who were also BPA analysts mocked the idea that college degrees made any difference in the reliability of BPA testimony. One remarked that ‘Thomas Edison was self-taught,’ and another said of college degrees in science: ‘It means I can show up for a class, it means I can take a test and it means I can graduate.’” (Accurso, 2022). However, if the officers who made these statements ever find themselves as defendants on trial for first-degree murder for a homicide that

they did not commit, odds are that they would want a medical doctor / research scientist to testify rather than a 40-hour course taker.

The fact that individuals exposed to even the slightest study of blood spatter consider themselves as connoisseurs in the field “frustrates forensic experts like Ralph Ristenbatt, an instructor of forensic science at Pennsylvania State University and 15-year veteran of the Office of Chief Medical Examiner in New York City. Ristenbatt also used to teach introductory blood-spatter courses, but said he stopped when he realized his students were holding themselves out as experts” (Smith, 2018). Dr. Ristenbatt is not only a medical doctor, but a research scientist who believes that “the justice system would be better served by more educated investigators” (Smith, 2018) rather than law enforcement officers who undertake a week-long workshop on blood-spatter. Dr. Ristenbatt feels so strongly about the issue that he “gave an impassioned speech to the commission, calling for mandatory educational requirements for analysts, including a four-year degree in natural or forensic science” (Smith, 2018). While he could be commended for attempting to set a minimal standard of education for blood spatter expert witnesses, it is doubtful that a bachelor’s level understanding of biology and physics would suffice when a first-degree murder case is being tried in criminal court. Even Prosecutor Jarvis Parson, J.D. of the Brazos County District Attorney’s “exclaimed, ‘We are talking about the liberty of individuals’” (Smith, 2018). When the Chief Prosecutor of a Texas District Court yells this into the press microphones for all to hear, it is clear that his argument holds water.

The last five years in blood spatter analysis have shown that the only professionals who are deserving of the title “Expert Witness” when it comes to blood spatter are doctors / research scientists who have abundant knowledge, achieved skill, ample experience, continual training, and doctoral-level education. Experts cannot be ignorant to the components of biology and laws of physics when involved in this realm of forensic science that requires precision and accuracy. This is especially true because their testimony can result in a defendant being sentenced to life without parole or even death.

References

- Accurso, A. (2022, May 1). *The Pseudoscientific Practice of Blood Spatter Analysis How the Desire for Convictions Drives Flawed Prosecutions*. Criminal Legal News. Retrieved on August 30, 2023 from, <https://www.criminallegalnews.org/news/2022/may/1/pseudoscientific-practice-blood-spatter-analysis-how-desire-convictions-drives-flawed-prosecutions/>
- Innocence Project Texas. (2020, January 17). *Joe Bryan: Time Served 32 Years*. Retrieved on August 30, 2023 from, <https://innocencetexas.org/cases/joe-bryan/>
- Smith, L. (2018, December 13). *How a Dubious Forensic Science Spread Like a Virus*. Propublica. Retrieved on August 30, 2023 from, <https://features.propublica.org/blood-spatter-analysis/herbert-macdonnell-forensic-evidence-judges-and-courts/>
- Tanford, A. (2023). *Expert Witnesses*. Indiana University Bloomington, Maurer School of Law. Retrieved on August 30, 2023 from, <https://law.indiana.edu/instruction/tanford/b723/13experts/T13.pdf>
- Taudt, J., Deutsch, G., Replier, M., Evans, S. and Effron, L. (2021, October 14). *Ex-Principal Who Spent 33 Years in Prison for Wife's Murder Fights to Clear His Name*. ABC News. Retrieved on August 30, 2023 from, <https://abcnews.go.com/US/murders-texas-town-connected-convicted-killer-maintains-innocence/story?id=80564869>