

Forensic Evidence in Court

Forensic Evidence in Court

A Case Study Approach

Christine Beck Lissitzyn

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Attorney Karen Goodrow, of the Connecticut Innocence Project, James C. Tillman, exonerated after 18 years for a crime he did not commit, and the author	336
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Acknowledgments

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Christine Beck Lissitzyn

Introduction

In criminal trials today, science has become the gold standard of evidence. In 1995, in the O.J. Simpson trial, a jury failed to convict Simpson of the murder of his wife, Nicole, and Ron Goldman, a waiter, and in the process rejected a mass of DNA and other scientific evidence pointing to his guilt. Today, three factors have coalesced to make scientific evidence virtually invincible to juries:

- Jurors have been steeped in a culture of media that makes it appear that science is both easy to obtain and test, and virtually invincible in its conclusions.
- Jurors are aware of defendants who have been exonerated based on subsequently tested DNA—they expect evidence at trial to ensure that they convict the right defendant.
- Jurors have come to expect the “dazzle” of the scientific presentation. Television shows and commentators have made many formerly esoteric technologies accessible to the public.

The public is fascinated with forensic evidence. It is the new medium in which murder mysteries are solved. But is all forensic evidence equal? Can some evidence impermissibly prejudice the jury? Have juries come to expect forensic evidence?

Is what you see on the television show CSI (Crime Scene Investigation) accurate? Is fingerprint matching done by a computer superimposing a picture of a fingerprint over a print taken from a crime scene? Do DNA results come back in twenty minutes (or even a day), identifying a specific person? Do forensic investigators go out to the crime scene and then try to track down the bad guys? Can all of this be done in one hour?

This book will examine several areas of forensic evidence in light of evolving standards in science, in the content and the application of the rules of evidence, and in the working of the judicial system. Most forensic evidence is admitted in criminal trials with the aid of an “expert,” someone with scientific credentials who can explain the methodology to the jury. This expert frequently gives an “opinion” to the jury. For example, a fingerprint examiner may give his opinion that a fingerprint lifted from a crime scene identifies a particular suspect. A handwriting expert may show the jury similarities in writing between a ransom note and the suspect’s normal handwriting and give his opinion that the suspect wrote the ransom note. These expert opinions are powerful evidence at trial, as they frequently carry great weight with the jury.

Not all experts are permitted to testify, however. First, they must be qualified based on training, education and experience. Second, they must be able to articulate the methodology used in their evaluation of the forensic evidence and convince the trial judge that the science itself is reliable. One test for reliability is whether the scientific community generally accepts the area of science. An example is DNA testing. The scientific community accepts the scientific hypothesis that one’s DNA can conclusively iden-

tify a person to the exclusion of all others. They may not agree with a particular method of obtaining the DNA profile, but they all agree with the science and that proper profiling methods will yield a reliable DNA profile. A number of courts have decided that DNA profiling is “judicially accepted,” which means that the party putting on the DNA evidence does not need to produce any evidence of the reliability of DNA testing.

This text examines in some depth six different areas of forensic evidence:

- Fingerprint identification
- DNA profiling
- Eyewitness identification
- Blood spatter analysis
- Handwriting analysis
- Polygraph

The first four types of evidence are routinely admitted in court. Fingerprint identification and DNA both rest upon accepted scientific principles. Blood spatter analysis is scientific at the level of measuring the size and shape of blood drops, but can become more hypothetical when analysts try to reconstruct a crime based on the blood patterns. Eyewitness identification has historically been viewed as the most important evidence in a criminal trial. Juries believe that a witness who identifies a suspect is one of the most important factors in a trial. Yet new science has shown that eyewitness identifications are subject to many possible errors and are not nearly as reliable as people once believed.

Handwriting analysis has been accepted in the courts for years, yet many examiners can give no particular method to their analysis or a specific number of handwriting characteristics that they must find in common to determine a match. Polygraph, by contrast, is extremely scientific in its measurement. No one disagrees that it accurately measures blood pressure, heart rate, and sweaty hands. But do those physiological measurements equate to evidence of deception or telling the truth? And even if they are accurate measures of deception, is the error rate—assumed to be about 20% at the most favorable—too high to allow it into court? As the jury is the one that is supposed to decide whether the defendant is telling the truth, doesn’t polygraph take away an important jury responsibility?

Finally, both handwriting and polygraph are now developing new forms of science to measure the same phenomena but with more reliability. Computer programs have been developed to measure known handwriting characteristics. Scientists are experimenting with using a functional magnetic resource imaging technique to measure brain waves that they believe will automatically react to statements that can connect a suspect with a crime.

The court system is changing constantly in its approach to admitting new scientific evidence. At the same time, the science is changing as well.

How important is science in determining “truth” in the courtroom? Are today’s juries overly impressed with science? Do they reject science if it sounds too complex or intimidating?

We will examine many of these questions in the context of case studies about actual criminal trials. The primary case study is *State v. Grant*, a cold case involving the stabbing death of a young woman in a New Haven, Connecticut garage in 1973. The case remained unsolved until 1997, when a fingerprint examiner at the Connecticut Forensic Science Laboratory found a match to an unidentified fingerprint taken from the crime scene by checking in an AFIS [Automated Fingerprint Identification System] database. The fingerprint belonged to Ed Grant, a garage mechanic who lived about a half hour

away from the crime scene. The fingerprint led to a warrant for Grant's blood, which was matched by DNA to a small spot on a handkerchief that was found at the scene.

Based on these two powerful pieces of forensic evidence, Grant was arrested, tried and convicted in May of 2002. He was sentenced to 20 years in jail. Investigators were unable to link Grant with the victim or to show any motive for the crime. The eyewitnesses had given somewhat different descriptions of a man they saw running in the garage and one eyewitness actually identified Serra's boyfriend. The witness was wrong and the boyfriend was released based on his blood type and alibi. Investigators sought an arrest warrant for another man and were ready to begin his trial when blood results showed his DNA did not match the blood found at the scene and believed to be that of the murderer.

Yet, how could the jury ignore the fingerprint and the DNA on the handkerchief? As the prosecution commented, the defense offered no "innocent explanation" for their presence at the crime scene.

In the course of studying this case and other famous cases, we will also examine other issues such as:

- How does the way crime scene investigators handle evidence affect whether it can be admitted in court?
- What is circumstantial evidence? Is it as good as direct evidence? Why is forensic evidence circumstantial?
- Does a jury have to believe an expert witness?
- What causes eyewitnesses to remember a particular face, when subsequent events prove that is not the person they saw?
- How do the Rules of Evidence work to keep out statements such as the entries in Nicole Brown Simpson's diary that she was afraid O.J. would kill her?
- Why wasn't the jury allowed to hear that Grant's fingerprint was entered into the database as the result of a domestic dispute?
- Why does an appeals court allow an evidence ruling of a trial court to stand, even where the appeals court might have made a different decision if it were the trial court?
- How can a prisoner who believes he is innocent get access to the crime scene DNA for testing so that he can be exonerated?
- Is the judge better than the jury to evaluate whether scientific testimony is reliable? Why not just let all forensic evidence in and rely on opposing counsel to cross examine the experts?
- Do defendants have a Constitutional right to present certain forensic evidence, such as polygraph, in their defense?
- How can the court determine if evidence is based on a reliable science that has been reliably applied?
- Does the possible prejudice to the defendant of admitting the evidence justify excluding it?
- How does the fact that the examiner uses his judgment in evaluating the evidence affect its admissibility?
- Does the evidence require an expert to explain it to the jury, or can the jury understand it just by looking at it?