

The Forensic Science Effect

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Introduction

As a criminal defense attorney and criminology professor, I am amazed and excited that so many Americans have an interest in forensic science. When striking juries, I used to ask how many jurors watched television shows like CSI, Law and Order, and Forensic Files. Now, I just ask how many jurors do not watch these shows. It makes for a much shorter list.

Forensic science has a lengthy history. Archeological projects have unearthed sources that contain some scientific techniques that ancient people used in trying to solve crimes. Autopsies that opened the body to determine the cause of death were performed at least 3000 years before the birth of Christ. However, this practice was not common because many ancient societies believed that the disfigurement of dead persons prevented them from entering the afterlife.

During the dominance of Rome, investigators limited themselves to non-human animals. Roman law forbade dissection and autopsy of the human body. Physicians and early detectives would work on the bodies of primates because of their similarity with human bodies.

It would not be until the modern age that great strides would be made in solving in crimes. Instead of relying on forced confessions by defendants, specialized law enforcement officers apply the art of forensic science.

Forensic science is the application of a broad spectrum of sciences to answer questions of interest to a criminal case. The term is often shortened to forensics.

There are numerous areas of forensics used today in solving and prosecuting crimes. The most commonly used are:

- **Forensic accounting** – study and interpretation of accounting evidence. This is particularly important in the prosecution of white collar crime;
- **Bloodstain pattern analysis** – draws on the scientific disciplines of biology, chemistry, mathematics and physics to ascertain the details and sequence of events of a crime, including the area of origin of an impact pattern, and movement of persons or objects after bloodshed, etc. You will commonly see this applied in murder cases when a gun is used;
- **Forensic chemistry** – study of detection and identification of illicit drugs, accelerants used in arson cases, explosive and gunshot residue. This type of chemistry is used in almost every modern arson case that is prosecuted.
- **Criminalistics** – analysis of physical evidence in criminal investigations. Applies various sciences to answer questions relating to examination and comparison of biological evidence, trace evidence, impression evidence (such as fingerprints, footwear impressions, and tire tracks), controlled substances, ballistics, firearm and tool mark examination, and other evidence in criminal investigations.

This is a very broad area of investigation. You will commonly see analysis of physical evidence in almost every case including, but not limited to, burglaries, property crimes, vehicular homicides, and aggravated assaults; and

- **Forensic DNA analysis** - takes advantage of the uniqueness of an individual's DNA to place a suspect at a crime scene, e.g., in a rape and sex crimes investigations.

There are many other ways for scientists to solve crimes by using science. The above are just some of the most commonly used in Georgia.

I would be remiss if I did not mention something that prosecutors must deal with in actual jury trials; the CSI effect. This phenomenon of popular television shows such as CSI, Cold Case, etc. has significantly raised the public's expectations of forensic science.

This probably comes from the shows' writers when they exaggerate the abilities of forensic science. This is and will continue to be a concern in the courtroom setting, where many prosecutors feel pressured to deliver more forensic evidence.