

## “CSI Effect” Is Mixed Blessing for Real Crime Labs

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A few months ago, a crime scene investigator from the Los Angeles County Sheriff's Department was dusting for fingerprints at the scene of a residential burglary. The victim of the crime was not impressed, however. "That's not the way they do it on television," she told the investigator.

Capt. Chris Beattie, who heads the L.A. County's Scientific Services Bureau—or "the crime lab"—calls it the "CSI effect." The popularity of television shows like *CSI: Crime Scene Investigation* and *Forensic Files*, he says, has turned millions of viewers into real-life science sleuths.

The phenomenon has reached into both classrooms and courtrooms. Universities have seen a dramatic increase in applications to forensic science programs. Prosecutors, meanwhile, are facing greater pressure from science-savvy juries to present sophisticated forensic evidence in court.

"It's a double-edged sword," said Beattie, a bald man with steel-rimmed glasses who has been with the Sheriff's Department for 32 years. "We have a larger pool of qualified people to do the job. But it's also created unreasonable expectations that we can solve every crime the way they do on *CSI*."

### From O.J. to *CSI*

The public's fascination with crime on television is hardly new. Classic detective shows like *Colombo* and *Murder, She Wrote* often used forensic evidence in story lines. But the new crop of shows has focused attention on the use of science in solving crimes.

On CBS's *CSI*—and its spin-off series *CSI: Miami* and *CSI: NY*—sharp-minded investigators, armed with high-powered forensic gadgetry, descend on crime scenes to study the evidence. Much of the action takes place in a laboratory.

"In the old shows, no one could figure out how to make the analysis of evidence interesting," said Elizabeth Devine, a supervising producer on *CSI: Miami*, who worked for 15 years as a forensic-scientist at the L.A. sheriff's office.

"What we did was slow things down to say, 'This is cool stuff,'" she said. "We wanted people to look through the microscope to show them what forensic scientists are looking at. This is the heart and soul of a lot of investigations."

Movies like *Silence of the Lambs* and *Kiss the Girls*, as well as real-life trials—from the O.J. Simpson case to the current Scott Peterson trial—have also drawn scores of new students to the forensic-science field.

There are now at least 90 forensic-science programs at universities across the United States. Last year 180 people applied for 20 spots in the forensic-science master's program at Michigan State University in East Lansing.

Jay Siegel used to run the Michigan State program and now heads a new undergraduate forensic-science program at Indiana-Purdue University in Indianapolis. He says the field is so competitive that it attracts the very brightest students, though many come with unreasonable expectations.

"A lot of them have watched *CSI* and say, 'That's what I want to do, go to crime scenes and collect evidence, analyze it, and confront [the criminals] and testify in court,'" Siegel said. "But no one does all of those things in real life, so people have to be disabused of these expectations."

## **Gadgetry**

While the cool technology in the *CSI* crime lab sometimes seems lifted out of *Star Trek*, real-world experts say the equipment used on the shows is firmly rooted in reality.

"The gadgetry that you see on TV is very close to what we have in real life," said Dean Gialamas, the director of the forensics laboratory at the Orange County Sheriff-Coroner Department in Santa Ana, California. "The major difference is the application of some of that technology."

For example, on *CSI*, a computer automatically matches fingerprints to those in its database. But in real life, scientists must perform such detailed work. And while DNA testing on the show is instant, in real life it takes at least a week.

There have been some obvious errors. In one episode during the first *CSI* season, scientists put a casting material into a stab wound and let it harden. When they pulled it out, the cast was in the shape of a knife.

"That's totally unrealistic," Gialamas said.

Real-life investigations, of course, take a lot longer than they do on television.

"We don't show any of the immense amount of documentation that has to be done in the field," said Devine, the *CSI* producer. "Nobody wants to see someone sitting at their desk taking notes."

Real-life forensic scientists are also often too busy to focus on a single case.

Take, for example, the L.A. County Sheriff's Office, the largest sheriff's office in the United States. It handles more than 50,000 cases involving forensic evidence per year. A crime lab in Downey, south of Los Angeles, handles about 70 percent of the cases—those involving narcotics and alcohol.

The rest of the cases, including major crimes such as homicide and rape, are handled in a nondescript building on the edge of downtown Los Angeles. Here, scientists analyze a wide array of forensic evidence, from firearms and explosives to fingerprints, hair, and fiber.

The workload is so severe that forensic scientists may work two dozen cases at the same time, though there are exceptions. Two scientists spent two years solely on the case of Richard Ramirez, also known as the Nightstalker, a serial killer who stabbed, shot, raped, and tortured dozens of victims in southern California in the mid-1980s.

But improved technology, such as DNA testing and advanced databases, has helped scientists in their crime-solving quest. Forensic experts from the L.A. County Sheriff's Office recently solved a 20-year-old homicide by identifying the DNA in a piece of hair.

### **The Big Picture**

So what makes a great forensic scientist?

"Strong technical competency, first of all," said Harley Sagara, an assistant director at the L.A. County crime lab. "But [he or she] should also be open-minded and have the ability to analyze the big picture and test an hypothesis."

Forensic scientists must also be able to explain their science. Sagara, who has more than 30 years of field experience, says he has given 300 to 400 court testimonies. Others have testified more than a thousand times.

The field is still dominated by men, who run 75 percent of U.S. crime labs. But that may be changing. The vast majority of students applying to university forensic-science programs are now women.

Devine, the *CSI* producer, says she would recommend the forensic-science field to anyone.

"I loved the crime scenes, I loved the challenge, and I loved the puzzle," she said. "It's a fantastic job."

**“CSI Effect” Article  
Questions**

Name \_\_\_\_\_

Answer the following questions based on the “CSI Effect” article.

1. What is one downside to crime shows, like C.S.I.?
2. What does Jay Siegel say about the expectations of college students wanting to major in forensic science?
3. Do the “gadgets” used on TV really exist? If so, how do they differ in real life? List two examples (one on fingerprints and one on DNA)
4. What are two obvious errors on the part of the TV crime shows?
5. Do forensic scientists work only one case at a time, like on CSI? How many do they usually work at once?
6. What makes a good forensic scientist? (Give three characteristics)