The CSI effect

By JJ Ebro
11/29/2005

The popular hit TV drama "Crime Scene Investigation," which features the use of high-tech gadgetry and DNA analysis to solve crimes, is raising public expectations about what local law enforcement agencies can accomplish -- to unrealistic levels.

Prosecutors are concerned that jurors are being conditioned to expect sophisticated forensic evidence to be presented at trials. Fauquier Commonwealth Attorney Jonathan Lynn said, "The reality is that we try a lot of criminal cases where there is simply no forensic evidence whatsoever."

"CSI," now in its sixth season, has been the top-rated TV drama for the past three years. It has spawned more than a dozen copycat and spin-off shows, as well as its own Xbox video game. For sale this holiday season, there are "CSI" board games, fingerprint analysis games and a facial reconstruction toy.

The forensic genre has so exploded that the Associated Press last week reported a "body count" of 63 human remains visible during prime time television in the last week of September this year, up from 27 during the same timeframe last year.

Last September, addressing a conference on white-collar crime at Georgetown University Law Center in Washington, D.C., Alice Martin, the U.S. attorney for the Northern District of Alabama, blamed the "CSI Effect" for the acquittal of HealthSouth Corporation founder Richard Scrushy on charges of securities fraud.

Martin said that jurors needed fingerprints of Scrushy to categorically link him to documents that had entered into evidence.

Backlog

"On TV, you see an exhaustive crime scene analysis, costing thousands of dollars. And you see the CSI team always tying everything neatly together and solving the case. In real life, resources are such that you don't subject a crime scene to all those efforts," Lynn said.

Out of a force of 125 men, the Fauquier County Sheriff's Office has a CSI team "that's basically me," Detective Mack Halley said.

Halley is a qualified fingerprint expert and recently completed an advanced ballistics analysis course with the FBI, but blood work and DNA analysis have to be sent to the state laboratory in Richmond.

"They have such a backlog that they sent us a memo recently, telling us they were not going to process blood or DNA samples unless it was a high-priority case like a murder, or we had suspects in mind that we could link the samples to," Halley said. The backlog is running approximately six to eight months, he said.

"For example," Maj. Paul Mercer of the Sheriff's Office explained, "if it were a breaking and entering and the perpetrator left some blood on the broken glass, and that was all we
"However, we are going to keep that evidence and later on something else could develop that may help us solve the case," Mercer said. The Sheriff's Office maintains warehouses full of evidence that goes back to cases in the 1960s.

With DNA now playing an increasing role in solving cold cases or overturning convictions, hanging on to the evidence has become even more important. A newly enacted law allows convicts to request that biological evidence be preserved, Lynn said.

Bluemont resident Brook Bogue, a former prosecutor, remembers a breaking-and-entering case wherein the thief cut himself and left blood on the window.

"It was unsolved for years until the blood was matched to a Fauquier man who had just gotten out of jail for another offense. He pleaded guilty and went back to jail. Usually, once they’re faced with the DNA, they just give in," Bogue said.

In another case, the perpetrator had broken into a restaurant and left a clear shoe print on a piece of glass. That crime went unsolved for months until a convict, serving time for another offense at another facility, was transferred to the Fauquier jail.

"He had told another inmate about getting away with this crime and our investigators learned about it. So they went to the footprint analysis and it just so happened he was wearing the same shoes and they were able to tie him to the restaurant break-in," Bogue said.

Fauquier and Loudoun have very few murder cases, said Keith Troxell, spokesman for the Loudoun County Sheriff's Office. However, in the high-profile killing of biophysicist and DNA researcher Robert Schwarz in his Mt. Gilead Home in 2002, "it was computer forensics that played the crucial role.

Analyses of "instant messaging and e-mails," Troxell said, were what led investigators to conclude that Schwarz's daughter and three of her friends had conspired in the crime.

The Atkins defense

Forensics technology can help prosecutors. At other times, it can be used against them.

Bogue remembers a drunk driving case she thought was open and shut: "It was pretty straightforward. I had the blood alcohol level and the driving behavior report -- she had been pulled over for speeding. The woman initially pleaded guilty and asked the speeding charge be dropped.

"It was a first offense, so I dropped the speeding. And then she turned around and reneged on the deal and pleaded not guilty to the DUI," Bogue said.

She grimaced as she recalled what happened next: "Her lawyer hired a former state forensic scientist who asserted that the woman was on the Atkins Diet and had not eaten for several hours prior to the offense and that somehow a state of ketosis could throw off the results from an Intoxillator 5000 (a precision machine used to measure blood alcohol levels).

"The jury acquitted her. Afterwards, one of them called me up and said that a few jury members wanted to meet with me. Essentially, they felt she was guilty but decided they had to go with the 'scientific evidence.'"

"The juror who called me said if I had just provided another expert to contradict what the defense presented, they would have convicted," Bogue said. "However, one, it was a totally unexpected maneuver, and, two, do you pull a state expert from the lab for several hours, basically the whole day, for a misdemeanor offense?"

Lynn recalled trying a case wherein there were no fingerprints on the gun nor powder burns on the suspect's hands to tie him to the crime. "I had to bring in experts to testify why prints don't adhere to certain surfaces -- especially if you figure in that it had been a rainy day and the suspect had been running with the weapon through brush and fields of tall grass," he said.

"The suspect had tested negative for powder burns, so I knew the defense was going to
try to use that. Our experts had to show that because of the construction of the firearm -- it was a rifle -- and because it was a small caliber, gunshot residue would be minimal or nonexistent, unlike if he had used a revolver," Lynn explained.

The CSI effect means that now, "jurors want to know whether a certain test was done or not done, whether or not it may be relevant to the case," Mercer said.

Halley pointed out that, despite popular perception, a fingerprint match proves crucial in only "1-2 percent of our cases" and blood and DNA analyses figure in "less than 10 percent of the cases."

Six years ago, a body was found dumped on the outskirts of Quantico. The victim was identified as an Ecuadorian immigrant, a resident of Woodbridge.

The Prince William County Sheriff's Office drew up a list of suspects, "people who might have known the victim, whom the family thought might have some motive," Halley recounted.

These individuals had been fingerprinted and Halley was able to compare prints to a set he had found on a scrap piece of paper near the body. "There was a match. We confronted him with the evidence. We were able to place him at the scene and he confessed," the Fauquier detective said.

Raising the bar

Blair Howard, whose successful defense in several high-profile cases has earned him a reputation as the area's Johnny Cochran, observed that the popularity of the TV show and the public's awareness of forensics techniques "raises the bar in the courtroom."

And if the case involves "hair, fiber, blood splatter or ballistics, I make damn sure I have my own expert," Howard said. That has helped him get clients acquitted in "several cases, where there was no issue in who was handling the weapon," Howard said.

Among these, he cited: Susan Cummings' shooting of Argentine polo player Roberto Villegas, a case that made international headlines; the shooting by a Leesburg man of his wife and her lover, she survived, the lover died and the husband was fined $1,000; and the acquittal of a Fauquier man charged with the "malicious wounding" of his estranged wife.

In the latter case, Howard said, "Her story was, and the sheriff's deputies accepted her version, that she went to her husband's home to talk to him and they argued and she was walking back to her car and he shot her in the back."

Using a retired FBI ballistics expert to testify for the defense, Howard was able to demonstrate to the jury that the husband had actually fired a "warning shot" through a cabinet, while the wife was outside with a sledgehammer trying to break in, "and he was in fear of his life," and the bullet went through the wall and hit her.

Halley, who worked the case, is still bemused over it. But he refused to comment.

"Basically, that's our system at work," Mercer philosophically interjected. "We use the evidence to draw up a plausible scenario of how something occurred and the defense puts together its own scenario and the jury decides which is more credible."

Sometimes, Bogue said, "all that's necessary is to raise the element of a doubt and jurors will be reluctant to convict."

Reverse CSI

The TV show is particularly popular among teen-agers. This has led to increased enrollment in previously obscure college-level forensics science programs. In the region, West Virginia University in Morgantown and Virginia Commonwealth University in Richmond are acknowledged leading lights.

"Undoubtedly, 'CSI' shows have increased the national interest in forensic science," said Clifton Bishop, WVU's director of Forensic and Investigative Science.
Bishop noted that in 2001, his program had only 88 students, while "this fall we have over 500 students, from 35 different states and five different countries."

Interestingly, he observed that 70-80 percent of students in the program are female. It's a phenomenon not restricted to America. "I recently had the opportunity to visit a program in Sidney and they reported similar numbers," Bishop said.

Anne Buckley, VCU spokeswoman, said total students in the forensics program increased from 246 in 2002-2003, to 424 in 2003-2004, 478 in 2004-2005 and down to 447 in the current school year.

Attrition rates, students dropping out of the program, had increased from 39 percent in 2002, to 44 percent in 2003, and 70 percent last year.

"Kids get into it and find out it's a lot of science (four years of chemistry), and tedious and not as glamorous and cool as it looks on TV," Buckley said.

"We call it the 'Reverse CSI Effect,' " she said.

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