College Forensics

Ms. Ciccone

COVID-19 Assignment – With Internet Access

Directions: For this project, you will create a presentation, which outlines forensic science applications discussed in class to a real-life criminal investigation. You will fully research a case study of your choosing and present the case details, evidence and forensic techniques that have helped solve or best understand the case. Please refer to the rubrics and guides for grading information.

Follow the steps below to finish this assignment:

1. Choose a case: Below is a list of possible case studies to choose from. It is important to pick a case that not only interests you but one that you are also comfortable with researching.

• The case must include aspects of forensic science in **attempting** to solve the crime. This includes evidence such as fingerprints, hair, DNA, testimony and other topics we have discussed in class thus far.

2. Research your case: You may use the internet, newspapers, textbooks, and library books to research your case. Remember, all work must be your own. Please, do not plagiarize and remember to cite your sources. To help you organize your research, a case study report sheet is provided in this packet. The report sheet should be turned in along with your project upon completion.

3. Design your presentation: You may choose to create a PowerPoint, poster board or written report.

Forensic Science Case Study Project Suggestion List

Casey Anthony	David Berkowitz	
Laci Peterson	John Wayne Gacy The Knight St	
Ted Bundy	Jeffrey Dahmer Jeffrey MacDo	
Amanda Knox	Marybeth Tinning	BTK Killer
Aaron Hernandez	Dorothea Puente	JonBenet Ramsey
Green River Killer	Lindbergh Kidnapping	Sam Sheppard

Forensic Science Case Study Project Rubric

CONTENT	4- Exemplar "Above & Beyond"	3- Satisfactory "Well done, needs minor improvements"	2-Developing "Lacking in obvious way/s"	1-Limited "Minimal Effort"
Research Report Sheet Depth of research Accuracy of Content Forensic science relation 	-All content is accurate. There are no factual errorsAll content requested on sheet is present -All content is related to forensic science	-All content is accurate; however, may not be relevant -Missing 2 items or less on report sheet -Forensic science content apparent	-Content is mostly accurate, with few minor discrepancies - Missing 3-4 items on report sheet - Forensic science content not obviously apparent	-Content is mostly inaccurate or irrelevant - Missing 5 or more items on report sheetContent not relatable to forensic science
Research Presented Title Victims, suspects Case summary, outcome 2 pieces of evidence 1 technique 2 pictures	-All content is described during presentation -All content described is accurate	-1-2 items not described during presentation or -1 piece of information described is inaccurate	-2-3 items not described during presentation or - 2 pieces of information are inaccurate	-4 or more items not described or - 2 or more pieces of information inaccurate
 Presentation Method Visual used is eye-catching and neat Spelling/Punctuat ion 	-Quality visual used, colorful, professional looking, neat -No obvious spelling or punctuation errors	-Visually appealing presentation method, mostly professional -Some obvious spelling/punctuatio n errors (3-5)	-Not visually appealing or eyecatching, sloppy -7+ errors in spelling/punctuation	-Overwhelmingly not visually appealing, method not present or 7+ errors in spelling/punctuation

Forensic Science Case Study Report Sheet

Title of Case:

Who was involved in the case?

Victim(s):

Suspect(s)/ Accused:

Case Details:

Summarize the case in at least 5 sentences.

Evidence available (be specific- don't just say "fingerprints, hair, gun powder residue"- describe what makes the evidence unique to the case):

- 1. 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

One forensic technique highlighted in case (ex: DNA fingerprinting, dusting for powders, microscope analysis- techniques involve learning more about the evidence than meets the eye or finding evidence in a special way):



Outcome/Results of case:

Notes/ Other Relevant Facts:

Resources- list of URLs/ books/ articles used:

1.

- 2.
- 3.
- 4.
- 5.
- 6.

College Forensics

Ms. Ciccone

COVID-19 Assignment With Out Internet Access

Directions: For this project, you will create a presentation, which outlines forensic science applications discussed in class to a real-life criminal investigation, the Casey Anthony trial. You will fully research this case using the provided materials in this packet.

Materials:

- Summary of the Case
- Timeline
- Evidence Reading
- CSI Effect

Assignment: You may choose to create a PowerPoint, poster board or written report which must include the following three components:

1.Case Study Overview

- What: (brief description of the case)
- Who: (victim, suspect, & their relationship...any other key players?)
- When/ Where:
- Evidence:
- Legal Outcome:

2. Case Evidence Worksheet

3. Final Thoughts

• Using evidence from the articles/information you read and from your own opinion of the trial, write 5-7 sentences on whether you think Casey Anthony killed her daughter.

Casey Anthony Case Study: Focus on Evidence in Case

Please type the answers below each point. Please let me know if you have any questions with this.

Read the article about some of the different pieces of evidence (Casey Anthony Evidence Reading) that was going to be presented in court against Casey Anthony. For each piece of evidence determine what the prosecution will try and show and how her defense team might discredit the evidence. Please let me know if you have any questions with this.

1. Evidence that is "consistent with"

What prosecution will try and show:

How Anthony's Defense attorney's discredit evidence:

2. Identifying human hairs

What prosecution will try and show:

How Anthony's Defense attorney's discredit evidence:

3. The new science of odor analysis

What prosecution will try and show:

How Anthony's Defense attorney's discredit evidence:

4. Evidence of flesh-eating insects

What prosecution will try and show:

How Anthony's Defense attorney's discredit evidence:

5. Human remains

What prosecution will try and show:

How Anthony's Defense attorney's discredit evidence:

6. Cyber-evidence

What prosecution will try and show:

How Anthony's Defense attorney's discredit evidence:

7. Partying Pictures/Lies

What prosecution will try and show:

How Anthony's Defense attorney's discredit evidence:

Casey Anthony Case

Timeline of Events – ABC News

July 6, 2011 — -- Casey Anthony was found not guilty Tuesday, July 5, of murdering her 2-yearold daughter, Caylee Anthony. The jury declined to convict her of either first degree murder or manslaughter.

Instead, the jurors found Casey Anthony guilty on four counts of providing false information to law enforcement, which are misdemeanors.

After a trial of a month and a half, the seven men and five women of the Florida Ninth Judicial Circuit Court jury took less than 11 hours to reach a verdict in a case that had grasped national attention in the more than three years since Caylee Anthony's June 2008 disappearance.

Below is a timeline of key events in the case:

June 15, 2008: Casey claims to have seen Caylee for the last time. She said she dropped the little girl off at a babysitter's home and when she returned to pick her up, neither Casey nor the babysitter were there.

June 30, 2008: Casey Anthony's car towed. The family car Casey Anthony had been using was found abandoned in front of an Orlando, Fla., cash advance business and towed away. When the towing company called Casey's parents, Cindy and George Anthony, they became concerned. Casey reportedly had told her mother that she was going on a "mini-vacation" to Jacksonville, Fla. Cindy Anthony later discovered that her daughter had been staying with a boyfriend.

July 15, 2008: Caylee Anthony reported missing. Cindy Anthony called 911 and said, "I found out my granddaughter has been taken, she has been missing for a month." Casey Anthony allegedly told her family and police that she had not seen her daughter for 31 days and had launched her own investigation. In one of three calls placed to 911, Cindy Anthony said, "I found my daughter's car today and it smelled like there's been a dead body in the damn car." Cindy Anthony later retracted that statement, and the Anthony family rallied around Casey.

July 16, 2008: Casey Anthony arrested. Casey told police that she left Caylee at the apartment of a babysitter named Zenaida Fernandez Gonzalez, and that both were missing when she returned. Police found, among other discrepancies with her story, that the apartment had been vacant for more than 140 days. Casey was arrested and charged with child neglect.

July 22, 2008: New revelations at bond hearing. In a bond hearing for Casey Anthony, detectives revealed that they had found strands of hair that looked like Caylee's in the trunk of the Anthony family car, and that cadaver dogs had smelled human decomposition in the trunk. Bail was set at \$500,000.

July 22, 2008: Casey Anthony called "person of interest." Officials said Casey Anthony is a person of interest in her daughter's disappearance and they were treating the case as a potential homicide.

July 24, 2008: Grandmother reports sighting of missing Caylee. Cindy Anthony told reporters that Caylee was spotted in Georgia, but police could not verify that claim.

Aug. 9, 2008: Caylee's third birthday. Birthday came and went with no sign of the missing child.

Aug. 17, 2008: Bounty hunter offers bond. The arrival of a Californian named Leonard Padilla added to the intrigue. A veteran bounty hunter with his own reality-TV show, Padilla claimed he'd been contacted by Casey Anthony and would post her bond.

Aug. 21, 2008: Casey Anthony out of jail again. Casey Anthony was released from jail after Padilla posted her bond.

Aug. 30, 2008: Casey Anthony returned to jail. Casey Anthony taken into custody on new charges, including petty theft.

Sept. 1, 2008: Police said they believe Caylee Anthony is not alive. The Orange County Sheriff's Office issued a statement saying that based on evidence that wasn't yet public and FBI tests, it believed "there is a strong probability that Caylee [Anthony] is deceased."

Sept. 5, 2008: Casey Anthony released from jail.

Caylee Anthony Timeline of Key Events

Sept. 25, 2008: Babysitter files lawsuit. Zenaida Fernandez-Gonzalez, the woman Casey Anthony reportedly named as a suspect in the case, filed a defamation lawsuit against Casey.

Sept. 29, 2008: Casey Anthony returned to jail. Casey Anthony was arrested again and returned to jail on multiple charges including child neglect, lying to investigators, petty theft and use of a forged check, but wasn't charged in conjunction with her daughter's disappearance.

Oct. 2, 2008: Casey Anthony named a suspect in her daughter's disappearance.

Oct. 14, 2008: Casey Anthony charged with first-degree murder. Casey was also charged with aggravated child abuse, aggravated manslaughter and providing false information to law enforcement.

Oct. 24, 2008: Police report evidence of body decomposition and chloroform in Casey Anthony's car.

Dec. 5, 2008: Jail releases Casey Anthony's visitation videos.

Dec. 11, 2008: Skull found near Anthony home. Skeletal remains of a young child were found a half-mile from the Anthony's home.

Dec. 12, 2008: Police "somewhat confident" it's Caylee. Police spokesman Carlos Padilla told ABC News police are "somewhat confident" the remains belong to Caylee Anthony.

Dec. 16, 2008: Defense team is not allowed access to the crime scene during an emergency hearing. For the second time, Judge Stan Strickland denied a motion by Casey Anthony's defense attorney to gain access to the area where the bones of a child were found.

Dec. 19, 2008: Caylee Anthony confirmed dead. Police announced that the results of DNA testing confirm that the remains found belong to the little girl.

Jan. 13, 2009: Tipster denies involvement in case. Roy Kronk, the utility worker who found Caylee Anthony's remains, dismissed suggestions that he was somehow involved in the toddler's disappearance.

Jan. 23, 2009: George Anthony leaves suicide note. Police discovered the grandfather of Caylee Anthony despondent and possibly under the influence of medication and alcohol in a Daytona Beach, Fla., hotel, his attorney told ABC News. Police also discovered a five-page suicide note that Anthony had apparently penned in the hotel.

April 13, 2009: Prosecutors announced they plan to seek the death penalty for Casey Anthony. In a reversal, prosecutors plan to seek the death penalty against Casey Anthony. In December, the state's attorney's office filed court papers indicating that prosecutors would not seek the death penalty in connection with the first-degree murder case.

June 16, 2009: One-year anniversary of the last time George and Cindy Anthony say they saw their granddaughter.One year after Caylee Anthony's disappearance, George and Cindy Anthony's lawyer, Brad Conway, said the couple does not know the truth about what happened to Caylee, but he knows of no theory in which the Anthony's daughter and Caylee's mother, Casey Anthony, is above suspicion. He also said Casey Anthony would likely take the stand in her own defense at the trial, which could be at least a year away.

June 19, 2009: Caylee Anthony's autopsy report released.

Dec. 18, 2009: Judge rules Casey Anthony can face the death penalty. Judge Stan Strickland denied the defense's motion to eliminate the death penalty, saying it would best be left up to a jury whether Casey should face death if she is convicted.

Caylee Anthony Timeline of Key Events

April 6, 2010: Casey Anthony jailhouse letters and inmate police interviews released. An inmate told police Casey said in jail that she used to "knock out" Caylee, perhaps with some kind of sedative, so she could go out at night. The inmate also claimed Casey knew details about her daughter's remains before police said they were made public.

April 19, 2010: Judge Stan Strickland steps down. In a scathing written decision, Judge Stan Strickland -- who had presided over the Anthony case since it began -- removed himself amid

controversy over his positive comments towards a blogger who was covering the case. "At its core, defense counsel's motion accuses the undersigned [Strickland] of being a 'self-aggrandizing media hound.' Indeed. The irony is rich," he wrote. "Motion granted."

June 15: 2010: George and Cindy Anthony mark the second anniversary of the day their granddaughter's disappearance. In an exclusive interview with "Good Morning America," George Anthony said he doesn't think about the trial's eventual outcome and is just living day-to-day. In a few months, the ordeal will have lasted longer than Caylee's short life.

July 15: 2010: On second anniversary of the night Caylee was finally reported missing, Casey, Lee, George and Cindy Anthony all appear in court for an emotional evidentiary hearing. After dramatic testimony by Cindy Anthony, who recounted the panicked night she learned Caylee had been missing for a month, a Florida judge ruled the 911 call Cindy made immediately afterward -- in which she discussed the "dead body" smell in the car Casey Anthony had driven - would be allowed in Casey's murder trial.

Sept. 14, 2010: Casey Anthony expands her legal defense team to six attorneys.

Jan. 3, 2011: The judge ruled that witnesses who had a romantic relationship with Anthony would be allowed, but said questioning would not veer into extremely intimate details of the relationship.

May 9, 2011: The trial begins with jury selection. The process of seating a jury took 11 days.

May 25: Casey Anthony's lawyer, Jose Baez, opened her defense with the claim that Caylee accidentally drowned in the family's swimming pool on June 16, 2008, and that Casey's father, George, helped her cover it up. The defense team also alleged that she was sexually abused by her father and brother and hid her daughter's death like she hid the secret of her alleged sexual abuse.

Caylee Anthony Timeline of Key Events

June 23: Cindy Anthony claims she, and not Casey, was the one who searched the terms "chloroform" and "neck breaking" on the family's home computer. Those searches were a key piece of prosecutors' circumstantial case because they say that Casey Anthony used chloroform to subdue her 2-year-old daughter, Caylee, and then suffocated her with duct tape over her nose and mouth.

June 29: George Anthony deals a blow to his daughter's defense by saying she was the last one to see Caylee alive. He also offered details about his 2009 suicide attempt, which he made just weeks after Caylee's remains were discovered. He said he did it because he was despondent that he had "failed" Caylee.

July 1: The prosecution presented evidence that questioned the truthfulness of Cindy Anthony's claim that she made the incriminating computer searches. They presented records indicating that Cindy Anthony was at work during the time she claimed to have searched for chloroform from home. Computer records revealed that someone using Cindy Anthony's username was logged on to her computer at the hospital where she worked for nearly nine hours on March 17, 2008, and March 21, 2008, the days computer searches for chloroform were done by someone in the Anthony family home.

July 3: Closing arguments begin. Defense attorney Jose Baez and prosecutor Jeff Ashton were both admonished and threatened with expulsion by the judge. The harsh scolding came about after Baez interrupted his summation and yelled to jurors that Ashton was a "laughing guy," as Ashton barely hid a smile behind his hand.

July 5: Casey Anthony is found not guilty of murdering her 2-year-old daughter Caylee. After a trial of a month and a half, the Florida Ninth Judicial Circuit Court jury takes less than 11 hours to reach a verdict in the case. The seven men, five women jury declines to convict Anthony of either first degree murder or manslaughter but does convict her of four counts of providing false information to law enforcement, which are misdemeanors. Anthony could get up to a year behind bars on each count when she is sentenced Thursday, July 7.

Casey Anthony Reading – Nate Rawlings, 2011

Casey Anthony CSI: A Triumph of High-Tech Forensics? (modified)

By Nate Rawlings, Thursday, Jun. 16, 2011

Introduction:

Millions of viewers have been transfixed by the parade of forensics experts presented by the prosecution over the past few weeks in the trial of Casey Anthony, a 25-year-old mother who stands accused of killing her 2- year-old daughter Caylee and dumping the body near their Orange County, Florida, home in 2008. The ubiquitous broadcasts of the trial are as compelling as anything that fans of the fictional forensics drama CSI: Miami might encounter. But the cutting-edge crime-scene science is far more technical, inexact and contradictory than anything a screenwriter might gin up. And it's just those contradictions that the defense will point out as they take center stage this week.

To find out how Anthony's lawyers might rebut the most damaging evidence presented by the prosecution, TIME asked crime experts to weigh in on the viability of aspects of the forensics testimony.

1. Evidence that is "consistent with" a crime does not constitute proof On TV, forensics scientists usually emerge from the lab with proof of the killer's identity. DNA, fibers, hair samples and a host of other evidence always seem to point fictional cops to the culprit.

But in reality, it's not usually about one hair sample. In the Anthony case, the prosecution has attempted to show that the evidence they've gathered is "consistent with" their theory of how Caylee was killed. Prosecutors allege that Anthony conducted Internet searches for making chloroform, used the homemade chemical to knock her daughter out, put duct tape over Caylee's mouth and nose and then dumped the body in the woods. Many of the experts in the case so far have testified that the evidence they've seen is "consistent" with these assertions.

But consistency is not as powerful in court as presenting evidence that points directly to the identity of a killer, explains Adina Schwartz, an expert in evidence law and science and a professor of law and philosophy at the John Jay College of Criminal Justice, City University of New York. "What does 'consistent with' mean? It means 'could be,' " she says. That uncertainty will create room for the defense to make its case.

2. Identifying human hairs isn't an exact science According to the prosecution's narrative, Anthony stored the body of her daughter in the trunk of her car after subduing the girl with chloroform.

Investigators discovered hairs in the trunk, which they tested for DNA. This would be the part of the TV plot where we'd learn who owned the hairs. In reality, DNA testing only narrowed the identity. Because the hairs they found contained no roots or tissue, investigators could test only for mitochondrial DNA, which is passed down through female ancestors. This means the hairs could belong to as many as five people: Casey, her mother, grandmother and brother, and finally Caylee.

"They cannot say with scientific certainty that it's Caylee's, although it's suggestive that it's Caylee's," Lawrence Kobilinsky, a DNA expert and head of the forensic sciences department at John Jay College, says of the hairs. (Kobilinsky consulted with Anthony's defense lawyer Jose Baez on the initial part of the case but has since stopped working on it.)

The hairs in the trunk had dark bands near the base, which prosecution experts testified indicate a decomposing body. Kobilinsky says the bands can also be caused by air pockets. "There are people that claim they can tell a difference, and so this may become an issue at trial," he says. "But this calls for subjective determination." In other words, two experts examining the same hair could have two opinions: that the darkening was caused by either decomposition or air pockets.

3. The new science of odor analysis is controversial One of the most disputed pieces of evidence is the result of a new odor-analysis technique developed by Arpad Vass, a forensics anthropologist at Oak Ridge National Laboratory in Tennessee. He claims that his research on cadavers at the University of Tennessee's "body farm" (an outdoor research lab where donated bodies are allowed to decay to study human decomposition) yielded a database of 400 chemical vapors he calls "decomposition odor analysis." Vass testified that the air in Anthony's trunk contained definitive signs of decomposition.

Vass has published articles in the peer-reviewed Journal of Forensic Studies, but Kobilinsky argues that his analysis should not have been admitted given Florida's Frye standard. "Its what the state calls 'state of the art.' It's what I call 'not ready for prime time,' " he says. "It's not junk science, but it never should be brought into a courtroom at this stage."

Prosecutors have also tried to show that the trunk contained unusual levels of chloroform, the chemical they allege Anthony used to kill her daughter. Tests conducted on the air in the trunk by the FBI laboratory and by Vass's odor-analysis technique long after Caylee's disappearance indicated high levels of chloroform. "Chloroform's quite a volatile liquid, and it wouldn't really stick around for that long," Ruth Smith, a professor of forensic chemistry at Michigan State University, says. "Meaning that if chloroform had been used, it was used at very, very high levels, which would not be common." The defense attacked Vass's odor-analysis technique as unreliable for proving decomposition of a body and blamed the stench on garbage found in the trunk.

4. Even evidence of flesh-eating insects isn't proof of a dead body To bolster the idea that Anthony's car trunk once contained a decomposing body, forensics entomologist Neal Haskell testified about insects found in garbage in the trunk. Insects are common in murder cases where a body is found outside. "You'll have bugs, various insects, and their larvae will be in [the remains]," says Charles Hitchcock, director of autopsy services at Ohio State University. "In that case, you'll sample those at the crime scene."

But without a body in the trunk, Haskell's testimony focused on insects that commonly swarm decomposing bodies. Haskell explained that the chemical composition of a decomposing body changes, and the insects attracted to the corpse will also change, allowing him to create a possible timeline for how long a body (though he could not prove it was a human body) may have been in the trunk, in this case three to five days.

Defense lawyer Baez challenged the idea that the insects were attracted specifically to a decomposing body, asking whether leftover food could also attract the bugs. Haskell explained that the insects in question would be attracted to "decomposing organic material," which is consistent with the prosecution's theory that Caylee's body was in the trunk. But then again, as we've heard, "consistent with" is not absolute proof.

5. Human remains don't tell the whole story When investigators found Caylee's remains in December 2008, six months after the girl was last seen, it wasn't a pretty sight. Her body had decomposed in a wooded area 20 ft. (6 m) off the road and less than a mile from her grandparents' home. Although investigators found 350 pieces of evidence at the crime scene, they could collect only a handful of bones.

Unlike most fictional cases, finding Caylee's remains yielded few definitive answers. The duct tape found on her skull contained no DNA. "Duct tape in general is great physical evidence in criminal cases," Kobilinsky says. "There is no way anybody can determine if the duct tape had been put on before, during or after death. There's no way you could do it scientifically or medically."

Jurors saw pictures from the crime scene and heard graphic details about plants and bugs that had infested Caylee's remains. "If you have skeletal remains, you're looking for every bone that you can find, and then try to reconstruct," Hitchcock of Ohio State University says.

Anthony's lawyers will likely emphasize that medical examiners were unable to pinpoint the cause of Caylee's death, but Hitchcock explains that can often be the case. In nearly 10% of medical autopsies, it is impossible to definitively determine the cause of death, a percentage that increases in criminal cases. "It is a giant puzzle,"

Hitchcock says. "It's attention to detail. Every coroner, every medial examiner, every forensic pathologist and dentist and anthropologist is really anal-retentive."

6. Cyber-evidence is key To prove their assertion that Anthony searched the Internet for homemade chloroform recipes, prosecutors called on digital forensics experts who recovered searches from Anthony's laptop, even after they had been erased. This may seem like science fiction, but it's a common practice for investigators.

"We start out by forensically preserving that evidence at a point in time," says Cheri Carr, director of the Dallas digital forensics lab for Stroz Friedberg, a digital security firm. The analysts use computer programs to recover data that has been deleted but is stored in unallocated space on the hard drive. It's tedious, complicated work, but the results are compelling for a jury.

"Computer evidence, in my opinion, is one of the best forms of evidence because it's somewhat indisputable," says Erin Nealy Cox, a former federal prosecutor and head of Stroz Friedberg's Dallas office. "Where you might have problems with eyewitnesses contradicting themselves or not remembering, you don't have those types of problems with computer evidence."

While the jurors have seen compelling evidence that someone searched for chloroform, the prosecution has one glaring limitation. "The one piece that [investigators] can't do is put the person at the computer, but there's a lot of circumstantial evidence you can use," Nealy Cox explains. Prosecutors will emphasize that the damning Internet searches occurred on Anthony's computer, while defense lawyers will stress that many people other than Anthony had access to the computer.

7. Partying Pictures/ Lies (added/ modified to article by L. Brun)

Prosecutors showed evidence that the mother repeatedly lied to family, friends, and the police about the whereabouts of her missing daughter. Instead of grieving or hiding, Anthony spent nights with her boyfriend, entered a "hot body" contest at a night club, went on shopping excursions, and got a tattoo that proclaimed: "Bella Vita," beautiful life in Italian.

The defense, led by Jose Baez, claimed in opening statements that Caylee drowned accidentally in the family's pool on June 16, 2008, and was found by George Anthony, who told her she would spend the rest of her life in jail for child neglect and then proceeded to cover up Caylee's death. Baez argued this is why Casey Anthony went on with her life and failed to report the incident for 31 days. He alleged that it was the habit of a lifetime for Casey to hide her pain and pretend nothing was wrong because she had been sexually abused by George Anthony since she was eight years old and her brother Lee also had made advances toward her

Did 'CSI' effect sway Anthony jury?

By Thaddeus Hoffmeister, Special to CNN

July 7, 2011 5:57 a.m. EDT

STORY HIGHLIGHTS

Thaddeus Hoffmeister: Forensics shown on TV crime shows raise juries' expectations

Juries now expect to see sophisticated scientific evidence before they'll convict, he says

Lawyers and judges try to instruct juries in realities of evidence to lower expectations

Hoffmeister: Lack of hard forensic evidence in case may have failed to convince jury

Editor's note: Thaddeus Hoffmeister teaches law at the University of Dayton School of Law and is the editor of the Juries blog.

(CNN) -- Did the "CSI" effect have an influence on the verdict in the Casey Anthony trial?

Programs such as "CSI: Crime Scene Investigation," in which forensics play a key role in solving crimes in 60 minutes or less, are thought by many prosecutors and legal analysts to create unreasonable expectations for jurors deciding fates in the real world. Jurors, for the most part, have no legal training or real-life experience with the criminal justice system. They are without any frame of reference for how trials operate beyond what they see on television.

Prosecutors have long argued that the "CSI" effect is real and creates unreasonable expectations in the minds of jurors. They maintain that the standards for obtaining a conviction these days have been raised because jurors now expect and want scientific evidence linking the defendant to the crime, especially in a circumstantial case.

To combat this problem, many prosecutors try to lower the bar during jury selection by telling potential jurors not to expect what they see on television to be played out in the courtroom.

In addition, some prosecutors present forensic evidence that neither proves nor refutes the defendant's guilt but is intended to demonstrate to the jury the thoroughness of the prosecutor's investigation. Other prosecutors use so-called "negative evidence" such as the testimony of experts to assure jurors that it is not abnormal for crime scene investigators to fail to find certain types of evidence. Finally, a few prosecutors seek help from the court by way of jury instructions.

Attorney: Jury selection crucial in caseFormer Anthony judge breaks silenceWhat's next for Casey Anthony?Why do we care about Casey Anthony?

Here is a sample of the instructions given by a judge to jurors in Ohio:

The effort to exclude misleading-outside-influence- information also puts a limit on getting legal information from television entertainment. This would apply to popular TV shows such as "Law & Order," "Boston Legal," "Judge Judy," older shows like "L.A. Law," "Perry Mason," or "Matlock," and any other fictional show dealing with the legal system. In addition, this would apply to shows such as "CSI" and "NCIS," which present the use of scientific procedures to resolve criminal investigations. These and other similar shows may leave you with an improper preconceived idea about the legal system. As far as this case is concerned, you are not prohibited from watching such shows. However, there are many reasons why you cannot rely on TV legal programs ...

Without talking to the Casey Anthony jurors directly, we can't know for sure what led them to their decision to acquit. But in a trial held in the crime-TV saturated culture of 2011, there is a strong possibility that the "CSI" effect was a factor.

There were arguably several instances during the trial where the lack of forensic evidence could have led the jury to have reasonable doubt about the prosecution's case.

First, the prosecution was unable to determine how 2-year-old Caylee Anthony died. Jurors understand when a body is missing but have difficulty accepting that science is unable to determine the cause of death.

Second, Casey Anthony's DNA was not on the duct tape that prosecutors said was used to suffocate Caylee Anthony. Many jurors consider DNA to be the gold standard of evidence, and when it is not present, questions arise.

Third, no evidence placed Casey Anthony where her daughter's body was ultimately discovered. Jurors wanted to know why the defendant, with today's scientific advancements, could not be placed at the scene of the crime.

In sum, this case was built on circumstantial evidence in which there was no forensic evidence directly linking Casey Anthony to her daughter's death.

These illustrations are by no means an indictment of the prosecutorial team. Quite the contrary, most believe that they performed well.

This was a "dry bones" case, and prosecutors can only present the evidence they possess. These examples are merely an attempt to deconstruct a verdict that many of the Americans following the case seemed to disagree with and to show how the "CSI" effect might have influenced the Casey Anthony trial.

Cases like this one join a long list of others that leave citizens puzzled as to how a guilty verdict wasn't reached.

It leaves scholars theorizing about possible changes to reach fairer verdicts and legislators looking for changes to ensure "common sense" results. But the reality is that while the system isn't perfect, it is

more often than not fair, based on standards that don't change depending on whether we dislike a defendant and feel that she or he should be adjudged as guilty.

The opinions expressed in this commentary are solely those of Thaddeus Hoffmeister.