

An Evaluation of Crime Scene Legal Cases Related to Judicial Gatekeeping

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ABSTRACT

After the Supreme Court decision in *Kumho Tire Co., LTD et al. v. Carmichael et al.* (1999) [1], judges have allowed crime scene investigators to testify as experts related to their knowledge, training, and experience. However, defense counsel normally challenge their type of testimony based upon case law precedent related to rules under various Supreme Court cases and The Federal Rules of Evidence. This paper evaluated legal cases challenging testimonies of crime scene investigators related to the reconstruction of a crime scenes and elements of criminal incidents. The pattern that emerged showed that judges, as gatekeepers of evidence related to expert opinions, generally admit testimony from crime scene investigators and reconstructionists, but often limit the weight of evidence for the jury. It should be noted that although crime scene investigators and reconstructionists were evaluated in these judicial cases, there are differences in reconstruction and initial crime scene investigations. The training and experience of the crime scene expert, and the general information related to the reconstruction of the crime scene, were two of the several variables that influenced the opinion of the judges.

Keywords: testimony, court acceptance, judicial gatekeeping, crime scene investigation, crime scene reconstruction, forensic science

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Introduction

Crime scene investigators evaluate evidence during an investigation and are often asked to present their findings to the trier of fact in legal proceedings. For years, the judicial gatekeeping function maintained strict guidelines that effected judicial discretion in the allowance of testimony from expert witnesses.

After the Supreme Court decision in *Kumho Tire Co., LTD et al. v. Carmichael et al.* (1999) [1], judges permitted crime scene investigators to testify as experts based on their knowledge, training, and experience. However, defense counsel normally challenge this type of expert testimony utilizing what is known

as the “Daubert standard,” [2] which is a test currently used in federal courts and some state courts to weigh the admissibility of expert witness testimony, established under *Daubert v. Merrell Dow Pharmaceuticals, Inc.* (1993), *Kumho*, and primarily Rules 702 or 403 of the Federal Rules of Evidence [1-4].

Judges, as gatekeepers, have an important responsibility in determining what information is presented to the jury at trial [5]. Furthermore, what judges allow as testimony has more impact, known as “The Gatekeeper Effect” [6]. Therefore, it can be inferred some judges are reluctant to allow testimony about crime scene



evidence to avoid unduly influencing the jury. As Maxwell [5] indicated, the importance the jurors place on evidence that is not deemed purely scientific can lead to miscarriages of justice.

This paper will evaluate how judges allow, limit, or withhold testimony in reference to crime scene reconstruction evidence. Upon evaluating state and federal case law and defense strategies, we evaluate which variables impact the gatekeeping effect used by judges in cases involving crime scene reconstruction testimony. To begin we should become familiar with some of the foundational Supreme Court cases that set precedent on the gatekeeping function, pertinent federal cases, and associated Federal Rules of Evidence.

Daubert v. Merrell Dow Pharmaceuticals, 1993 (United States Supreme Court)

The Frye Test, under Frye v. United States [7], utilized a ‘general acceptance’ rule for accepting scientific expert testimony as evidence in court. As such, novel techniques or new methodologies related to scientific testing and findings were excluded until the Daubert decision. After Daubert, the Supreme Court held expert testimony can be admissible if the findings are rooted in a valid scientific methodology. The Supreme Court’s interpretation of Rule 702 of the Federal Rules of Evidence indicated no requisite for ‘general acceptance [3].’ Therefore, “general acceptance” of research methodologies related to a case is no longer the standard. However, the trial judge is not disabled from screening such evidence. Instead, certain standards are required under Rule 702, as interpreted by the Supreme Court: (1) the theory or technique used has been tested; (2) there must be known standards and maintenance of the operation of the technique used; (3) consideration of potential error rate with technique used; (4) whether the technique is generally accepted; and (5) whether it has been subjected to peer review and publication [3].

Kumho Tire Ltd. v. Carmichael, 1999 (United States Supreme Court)

As much as Daubert [2] applies to reliable and relevant scientific testimony, crime scene

reconstruction testimony can be evaluated by Rule 702 of the Federal Rules of Evidence. In the Kumho landmark decision, the Supreme Court elaborated on the “gatekeeping” function of judges who evaluate expert testimony.

First, the Daubert [2] decision focuses on scientific related testimony and precedent allows judges, when evaluating reliability, to consider peer-reviewed research, reliable methodology, and how the expert’s use of methodology is applied to the case to be evaluated. Second, the Supreme Court focused on non-scientific related testimony. The Supreme Court opined engineers are not scientists and addressed the question of how to apply the Daubert factors to non-scientific testimony, or in the context here, crime scene evaluations [2]. The Supreme Court decided Daubert can apply to judicial discretion related to technical or other specialized training related to crime scene evidence and the testimony thereof. This decision puts forth the idea and opens varied possibilities that crime scene experts can testify to the specialized and highly technical procedures regarding the initial investigation and reconstruction of a crime scene as long as the judge determines the testimony is reliable and relevant [2].

In United States v Illera Plaza (2002) [8], a Federal District Court opined on the testimony of fingerprint examiners related to the ACE-V methodology. Although it was not a “precedent setting” Supreme Court case, the Court’s interpretation of both Daubert and Kumho lends toward a delineation of technical expertise versus subjective evaluations of evidence [1, 2]. As such, the Illera Plaza Court, looking at fingerprint testimony through the lens of Kumho, intimated the testimony regarding fingerprint patterns, and comparisons of similarities and dissimilarities of minutiae in those patterns, are relevant to crime scene cases. However, the Illera Plaza Court held gatekeepers should instruct jurors to lend less weight to evaluations and verifications, even from technically trained examiners, and the associated testimony over these evaluations should be limited due to the unknown error rate of identifications [1, 8].

Given these requirements, defense counsel often used these procedures to challenge potential crime scene investigators and reconstruction experts. It is important to note strategies employed by defense and prosecuting



attorneys in challenging the testimony of these witnesses and their experience. In *General Electric Co. v. Joiner* (1997) [9], the Supreme Court indicated expert testimony should be more than just testifying to cause and effect, but include a methodology practiced by the expert.

Defense Counsel Strategies

There are numerous tactical avenues for the defense to challenge the testimony of a crime scene reconstructionist. The first of these would be to argue the testimony is inadmissible as a matter of evidentiary law. This would be done by arguing (1) under Rule 702 of the Federal Rules of Evidence, there is no foundation for allowing the “expert” testimony and (2) under Rule 403 of the Federal Rules of Evidence the testimony is otherwise inadmissible. Rule 403 of the Federal Rules of Evidence specifically states: “The court may exclude relevant evidence if its probative value is substantially outweighed by a danger of one or more of the following: unfair prejudice, confusing the issues, misleading the jury, undue delay, wasting time, or needlessly presenting cumulative evidence [3, 4].”

Challenging the foundation under Rule 702 will normally be done in a voir dire hearing of the witness outside the presence of the jury. Typically, questioning will be concerned with both the field of expertise the witness claims and the personal qualifications of the witness. In *Daubert*, the Supreme Court established trial judges as “gatekeepers” of this type of evidence and set out requirements for testimony to be presented to the jury [3].

This tactic would involve utilizing the *Daubert* factors, either the lack of a personal foundation for the expert or a lack of scientific foundation for the entire field of study.

Daubert suggests numerous factors courts should consider regarding the expert’s personal qualifications (Fed. R. Evid 702). While this type of challenge might be more constructive, it is unlikely the government failed to thoroughly parse the witness’s foundational qualifications prior to calling the witness to the stand. Section (b) of Rule 702 does require the expert’s testimony to be based on “sufficient facts or data” which might be an early opportunity for the defense to challenge the sanctity of the crime scene [2,3].

Concerning the field of expertise, the court

will need to determine if the field of expertise claimed by the expert is known to reach reliable results for the type of opinion the expert would give.

The other legal approach, under Rule 403, would be to argue the court has the discretion to exclude evidence, otherwise reliable, for a variety of reasons: prejudice, confusion, waste of time, or needlessly presenting cumulative evidence [4].

The stronger of the two grounds would be to suggest the testimony of the crime scene reconstructionist would be cumulative to the other witnesses who testified as to the nature of the crime scene.

A third approach would be to hire an independent expert to work with the defense to presumably rebut the State’s expert testimony. Of course, defense experts must make the same foundational showing as discussed above and counsel must be prepared to address the *Daubert* criteria [2].

Finally, a fourth approach would be for the defense attorney to essentially ignore the expert’s testimony and focus on alternative theories of establishing reasonable doubt in the case. Courts in some states will instruct the jury that simply because a witness has been declared an expert does not mean the jury is required to credit his/her testimony (Fed. R. Evid. 403) [4].

The jury will be told to evaluate the expert as they would any witness and determine if the witness’s opinions square with the other evidence in the case. Furthermore, the bias of a witness to include the fact experts are typically lifetime paid employees of the government, is always a consideration juries may use to determine credibility.

Considering courts interpretations of Rule 702, Rule 403, *Kumho*, and *Daubert* procedural and substantive rules, we summarize select state and federal cases, which have evaluated judicial gatekeeping decisions involving crime scene expert/reconstruction testimony [1-4].

State Case Law

People v. Farnam, 2002 (California Supreme Court)

People of California v. Farnam (2002), [10] a case decided by the California Supreme Court, involved the crimes of first-degree murder, rape, and sodomy. The initial investigative theory



was Farnam cut through a window, made entry, attacked, raped, and murdered the victim. Latent fingerprints, blood, and other evidence was used to identify Farnam as the suspect. A crime scene reconstructionist theorized Farnam struck the victim over the back of the head while she was tied down.

The defense objected to the theory associated with the blood spatter analysis presented by the criminalist who was called to assist in the investigation. The defense further objected the criminalist was not qualified as an expert to be a factual witness for the prosecution.

The court ruled the criminalist's experience, education, training, and membership in forensic science associations contributed to his qualification. Furthermore, the criminalist was involved in research and presenting papers at professional conferences. The court compared the qualification of this expert to a previous case in which a trial court erred in permitting testimony from a crime scene investigator, who did no research, analysis, or experimentation, but had just attended blood spatter training. The court stated, "Crime Scene Reconstruction opinions are generally admissible" (*People v. Bolin*, supra, 18 Cal.4th at pp. 321-322) [10, 11].

People v. Prince (California Supreme Court)

People v. Prince, 156 P.3d 1015 (2007) [12] was a case involving the Clairemont serial killer, who was convicted of several murders, rapes, and burglaries. The FBI aided the investigation with veteran crime scene investigators. The defense strategy was misidentification by the witness, unlinking the serial crimes, and an alibi. The defense successfully suppressed the testimony of one of the agents, who had not received any psychological profiling training, who could have contributed to the motive of the accused as a serial killer. Another agent had several years of experience working crime scenes, and he also had experience in reviewing case files and reconstruction of crime scenes. According to *United States v. Webb* [13], trained officials who inform a jury about the defendant's activities, which were consistent with a common criminal modus operandi, can assist the jury in making common inferences, even in complex criminal actions.

The court ruled that this type of objection is mitigated by the weight of the evidence by the trier of fact and not to the admissibility of the evidence.

The Prince Court affirmed the convictions of Prince and found no errors regarding the admissibility of the testimony of a crime scene expert, despite defense objections to the expert's experience and training and minor errors of analysis [12].

People v. Fierro (California Supreme Court)

People v. Fierro, 821 P.2d 1302 (1991) [14], involved a store robbery and subsequent murder of the store owner. At trial, the defendant sought to utilize two crime scene reconstruction experts to contradict the prosecution's expert, a forensic pathologist. The testimonial issues surrounded whether or not the victim was lying flat on the ground and shot "execution style," which was the theory posited by the pathologist based upon the bullet and bone crush injury.

One of the defense experts, a reconstructionist, testified against the theory based upon the lack of a mushrooming effect on the bullet. The expert was allowed to testify as a ballistics expert based upon his experience at crime scenes, but the Court limited his testimony to that area. The Court ruled the jury was not to consider his refutation of the broader theory due to never having examined bullet wounds from a human body and lack of experience in pathology. Therefore, he could not testify about injuries sustained from bullets and their trajectories.

The second defense expert, also considered a crime scene reconstructionist, also disagreed with the pathologist and indicated the victim was hunched over and not shot execution style. The second reconstructionist had 20 years of experience in photographing plane and car crashes, but never had experience photographing a crime scene related to a shooting death and no pathology experience. Furthermore, the defense attempted to qualify him as an expert related to ballistics because the second expert had watched several documentaries of combat, read literature on ballistics, and had personal experience with guns. The court limited his testimony to only observations related to the overall crime scene [14].



State v. Ellis (South Carolina Supreme Court)

State v. Ellis, 547 S.E.2d 490 (2001)[15] involved the defendant who allegedly shot the victim with a gun while the victim was riding his bike. The defendant argued self-defense, claiming the victim dismounted the bike and charged at him with a knife. The State argued the victim could not have charged him as the victim was riding his bike when he was shot. The State utilized a law enforcement officer who investigated the scene, who was considered an expert in crime scene processing and fingerprint identification. The officer testified the victim was astride the bicycle when shot (the case facts do not report how the officer arrived at this conclusion), and the prosecution indicated to the jury that his opinion was “scientific testimony” and the reconstruction positioning by the officer was “scientific evidence” [15].

On appeal, the South Carolina Supreme Court addressed the issue of whether the lower Court erred in viewing the Officer’s testimony as sufficient if limited to the measurements taken at the scene and documentation of the shells and blood stains. The Court ruled for the defendant, finding the lower court erroneously allowed the officer to exceed the scope of allowable testimony as an expert, which improperly influenced the jury on the issue of the self-defense claim [15].

State v. Clark (Ohio Court of Appeals)

State v. Clark, 655 N.E.2d 795 (1995) [16] involved a domestic dispute between Clark and a former girlfriend. The defendant claimed his girlfriend tried to grab his gun in a bathroom at his apartment and was shot when reaching for his gun. The defense claimed her death resulted from an accidental discharge during an argument. Various forensic specialists, focusing on ballistics, injury evidence, and gunshot residue, testified the gun had to be at least three feet away from the victim when discharged. The victim had an entrance wound on the right side of her upper abdomen and an exit wound on her left lower back. The bullet traveled from front to back, from the right to the left side, and in an upward path. A hole in the bathroom wall approximately six feet up was also located.

A crime scene photographer and reconstructionist employed AutoCAD software to

reconstruct the crime scene. AutoCAD is a computer software used for drafting two- and three-dimensional images. Based upon the measurements taken of the crime scene documented by responding investigators, the reconstructionist created a computer drawing of the crime scene using the following: the hole in the bathroom wall near the tub, the injuries, body dimensions of the victim, and the probable distance of the gun 30 to 36 inches from the victim to the defendant. No cartridge cases were found at the scene (it is unknown from the case facts if it was a revolver).

The reconstructionist adjusted the drawings for proposed positions of the victim as purported by the defendant at trial: edge of the tub, grabbing the muzzle of the gun. The conclusions posited by the reconstructionist refuted all positions the defense strategy employed, to include one where the gun would have had to have been discharged from a trajectory below the floor. The reconstructionist concluded, since the bullet went through only soft tissue, the gun had to have discharged from an angle coinciding with the proposed trajectory of the bullet.

The defense objected to the testimony of the reconstructionist on two grounds: his use of AutoCAD software and the prejudicial nature of his testimony. First, the Court of Appeals indicated that the use of software was a regularly accepted practice utilized in crime scene reconstruction. Second, the Court acknowledged *voir dire* proceedings, the reconstructionist had the requisite training, education, and experience of documenting crime scenes to be qualified as an expert. Finally, the Court rejected the defendant’s arguments utilizing the Daubert analysis, Rule 702 of the Federal Rules of Evidence, which mirrored Ohio’s Rules of Evidence, and Ohio case law finding the reconstructionist’s testimony was relevant and not unduly prejudicial to the defendant [2, 3, 16].

Almond v. State of Georgia (Georgia Supreme Court)

Almond v. State of Georgia, 553 S.E.2d 803 (2001) [17], involved a homicide resulting from a drug sale gone wrong, upon which the defendant was subsequently convicted of malice murder and the sale of cocaine. The State utilized an investigator, who qualified



as an expert crime scene reconstructionist, for an evaluation of the crime scene. Despite testimonial witnesses confirming the criminal act and the defendant's own confession, the defendant sought an appeal based upon the testimony of the reconstructionist over a question raised in court. At trial, the prosecutor asked the reconstructionist if he had formed an opinion as to what occurred based upon the reconstruction, and the defense objected claiming the broad generality of the question invaded the jury's province. In another objection, the defense suggested the digital photographs admitted at trial unfairly biased the jury.

The Supreme Court of Georgia indicated the trial court proceeded properly by following precedent. First, the broad question did not bias the jury because the investigator did not indicate guilt in his testimony, but only a theory of the crime, and left the trier of fact to decide guilt. Second, the trial court properly admitted the digital photos because they were authenticated by the investigator, and he testified they purported to depict the crime scene accurately. The Supreme Court of Georgia found the guilty verdict associated with the theory of the crime, and the accuracy of the photos were left to the jury's discretion to be evaluated and did not amount to bias. The summary of this case implied that reconstructions or initial investigators do not prejudice a jury by interpreting evidence and providing an alternate theory of the criminal offense [17].

Federal Case Law

Osborne v. Terry (United States Court of Appeals, 11th Cir)

Osborne v. Terry, 466 F.3d 1298 (2006) [18] involved a homicide in a vehicle on an abandoned road. On appeal, the defendant raised the issue of whether his defense counsel was ineffective because they did not hire a crime scene reconstructionist, who also specializes in ballistics. Self-defense was the defense theory in this case. The defendant admitted to shooting both victims in the car but argued he was defending himself. However, several state law enforcement experts indicated the victims received incapacitating gunshot wounds while facing forward while the defendant was in the

back seat of the vehicle. Defense counsel hired a retired law enforcement officer to review the crime scene photos, and both agreed a reconstructionist would not assist in their defense strategy. The Court of Appeals did not support the defense counsel's decision not to call experts in support of the defense, and the lower court was reasonable under the totality of the circumstances in ruling against a claim of ineffective assistance of counsel. Further, the Court held counsel could not provide proof a reconstructionist would be able to successfully refute the state's experts.

United States v. Nevels (United States Court of Appeals, 10th Circuit)

United States v. Nevels, 490 F.3d 800 (2007) [19] case involved possession of a firearm and charges associated with the Federal Career Criminal statute related to a homicide. Officers responded to the defendant's 911 call where he claimed self-defense against an intruder. The victim's body had an unfired semi-auto pistol near it. Investigators indicated another semi-auto handgun was found that was consistent with spent cartridge cases, bullet fragments, and the fatal wounds of the victim. On appeal, the defendant argued the crime scene expert's evaluation of the positions of the defendant and victim violated Rule 403 of the Federal Rules of Evidence [4].

The appellate court explained Rule 403 balances evidence that might unfairly prejudice the jury against the probative value of the evidence. Furthermore, the testimony of the crime scene reconstructionist was used to contradict the defense's argument of self-defense or justification [4, 19].

González-Pérez v. Gómez-Águila (United States District Court, Puerto Rico)

In González-Pérez v. Gómez-Águila, 296 F.Supp.2d 110 (2003) [20], defense filed a motion in limine prior to the trial related to a shooting incident. The defense challenged the proposed reconstruction of the crime scene from an expert, who had more than 20 years' experience in working crime scenes. Much of the experience did involve evaluating blood patterns in crime scenes. However, the



defense contended the expert's opinion should be limited because the formal training of the reconstructionist was obtained from a four-hour blood pattern analysis course from a conference by the Association of Crime Scene Reconstruction.

The District Court denied the motion in limine and stated defense council did not make clear how the expert's qualifications would be unreliable, but could object at trial over the lack of formal training related to his analysis of bloodstain patterns in crime scenes.

Conclusion

As we have evaluated cases involving initial investigations of crime scenes, reconstruction of crime scenes involving evidence, and the testimony of experts allowed in courts, certain patterns emerge across state and federal judicial decisions. The evaluation of these cases has

produced specific outcomes in the Table 1.

In following case law precedent related to Daubert and Kumho, most gatekeepers allow the testimony of witness who have experience in investigating crime scenes [1, 2]. Second, some state laws in alignment with Federal Rules of Evidence allow for the testimony of investigators of crime scenes if the testimony informs the jury if its probative value outweighs its prejudicial value [3, 4]. Third, technical training over specific investigative techniques should be balanced with field experience or publishing experimental findings. This goes to the judicial gatekeeping function of reliability in the reliable and relevance test. Finally, the implications from these cases are as follows: the more specified training related to aspects of evidence, the more experience or experimentation is needed to meet standards of evidence, and obviously successful opportunities

TABLE 1: Crime scene testimony allowed?

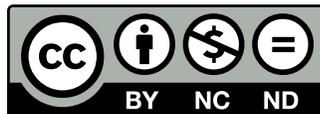
	Limited/ Weight of Evidence	Allowed	Not Allowed	Outcome
State Cases				
Almond v. State		×		CS photography and theory of crime admissible
People v. Farnam		×		Criminalist's experience, education, training, contributed to qualifications and testimony are generally admissible
People v. Fierro	×			General observations, but limited on ballistics and pathology due to lack of training/experience
People v. Prince	×			Errors in reconstruction affects weight not admissibility
State v. Clark		×		CSR AutoCAD software admissible and CS photographer testimony allowed
State v. Ellis			×	General observations, but testimony related to defendant's claim of self-defense not allowed
Federal Cases				
González-Pérez v. Gómez-Águila	×			CSR training at a conference goes to weight of testimony restrictions, not admissibility
Osborne v. Terry		×		Initial testimony allowed; failure to hire Defense counsel not using a reconstructionist does not equate to ineffective counsel
United States v. Nevels		×		A reconstructionist's opinion that confirms initial investigation does not violate Rule 403 of the Federal Rules of Evidence



toward informing the jury are likely to pass the judicial gatekeeping functions in our courts.

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