F30 Don't Shoot the Messenger: Firearm and Toolmark Evidence Is Still Reliable

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Learning Overview: The goal of this presentation is to illustrate the reliability of firearm and toolmark analysis despite recent court rulings limiting or precluding such evidence.

Impact on the Forensic Science Community: This presentation will impact attendees by providing wider perspective on recent court rulings on firearm and toolmark analysis, define the relevant scientific community, and explain how additional research has supported traditional techniques.

On January 13, 2018, an off-duty police officer observed, from his apartment window, a man wearing a "72" jersey fire two shots in the air and then enter a parked Sports Utility Vehicle (SUV). The officer called 911, described the shooter, and stayed on the phone as he observed uniformed police officers respond within minutes. These officers asked the passengers in the SUV to exit. There was one male wearing a "72" jersey (defendant A) and two females. The officers recovered one firearm inside one of the female's purses (defendant B) and two spent shell casings on the road directly next to the SUV. Detectives identified the recovered cartridge casings as having been fired from the recovered weapon. Additionally, DNA results from the trigger of the firearm matched defendant A.

For decades, prosecutors have presented firearm and toolmark evidence at trial. But it was not until *People v. A & B*, that this State court made the surprising decision to hold a *Frye* hearing on this forensic science discipline—a discipline that is in no way a novel science.[1] Nonetheless, the Court ruled that the People were precluded from presenting evidence that recovered shell casings and test fires were identified as having been discharged from the recovered firearm.

A close examination of the decision will reveal, per this study, the court misapplied the *Frye* test, unjustifiably credited or discredited experts, and improperly dismissed the validation studies and the laboratory's methodologies.

In *People v. LeGrand*, the Court of Appeals explained the *Frye* standard.[2] The Court held that "the *Frye* test asks 'whether the accepted techniques, when properly performed, generate results accepted as reliable within the scientific community generally.' " (*Parker v. Mobil Oil Corp*., quoting *People v. Wesley,* see also *Marsh v. Smythe*).[3-5]

After several days of testimony, the relevant scientific community was defined by the People's witnesses: trained firearm and toolmark examiners; the 200+ accredited labs across the world that conduct the same analysis as the instant laboratory; the Organization of Scientific Area Committees (OSAC) Firearm and Toolmark Subcommittee; the State Commission on Forensic Science; as well as many statisticians and other non-firearm practitioners listed in the submitted validation studies. Among this community, firearm and toolmark examination far exceeds general acceptance.

Instead of counting all scientists' votes, the Court credited the two defense witnesses (a law school dean and a psychiatrist) as representing a completely unknown, yet statistically significant, group of non-practitioner scientists who do not support firearm and toolmark analysis.

The Court's decision discounted peer-reviewed published validation studies that demonstrate the accuracy of firearm and toolmark examination, stringent adherence to the highest international accreditation standards, the laboratory's "blinded" review procedures, and independent scientific research.

Reference(s):

1. *People v. A & B*, 2020 WL 3564693 (Sup Ct, Bronx Cty, June 30, 2020).
2. *People v. LeGrand*, 8 N.Y. 3d 449 (2007).
3. *Parker v. Mobil Oil Corp*., 7 N.Y.3d 434, 446 (2006).
4. *People v. Wesley*, 83 N.Y.2d 417, 422 (1994).
5. *Marsh v. Smythe*, 12 A.D.3d 307 (1st Dept. 2004).

Firearm and Toolmark, *Frye*, Relevant Scientific Community

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