

# COMMUNICATING CONCLUSIONS – CUSTOMER FEEDBACK FROM THE CRIMINAL JUSTICE SYSTEM

Helen Griffin (805) 654-3642

Ventura County Sheriff's Office  
Forensic Sciences Laboratory



# History

- Even without statistics, conclusions have different weights based on:
  - Whether the comparison involves **class characteristics** or **class plus individualizing characteristics**.
  - The **quantity** and **quality** of the evidence.
  - The **commonality** of the evidence in the environment.

# History

- In the absence of statistics, a scale allows for conclusions that express the level of (un)certainty.
- However, multiple conclusion scales can lead to confusion.

# History

- Christopher Bommarito's scale was introduced at the 2009 Trace Symposium.
- The definition for each confidence level is provided in the report. Even with different scales, there can be **no confusion**.

# Survey Format

- **Style 1 – wording used prior to 2009**
  - Identified
  - Probably associated
  - Could be associated or associated with another similar source
  - Not eliminated
  - Neither identified nor eliminated
  - Eliminated
- There was **no key provided** in the report to distinguish these various degrees of association.

# Survey Format

- **Style 2 – wording used after 2009**
  - Identified
  - Very strong support
  - Strong support
  - Moderately strong support
  - Moderate support
  - Limited support
  - Inconclusive
  - Eliminated
- The report contains both the **conclusion and the supplemental explanation** contained in the “Trace Evidence Conclusion Scale.”

# TRACE EVIDENCE CONCLUSION SCALE

Trace Evidence Conclusion Scale (For The Hypothesis Listed Under “Objective”):

- **Identification (Type I Association)** - A positive identification; an association in which items share individual characteristics that show with reasonable scientific certainty that the items were once from the same source.
- **Very Strong Support** - An association in which items are consistent in all measured physical properties or chemical properties and share highly unusual characteristic(s) that are unexpected in the population of this evidence type.
- **Strong Support (Type II Association)** - An association in which items are consistent in all measured physical properties or chemical properties and share unusual characteristic(s) that are unexpected in the population of this evidence type.
- **Moderately Strong Support (Type III Association)** - An association in which items are consistent in all measured physical properties or chemical properties so could have originated from the same source. Because similar items have been manufactured or could exist in nature and could be indistinguishable from the submitted evidence, an individual source cannot be determined.
- **Moderate Support (Type IV Association)** - An association in which items are consistent in all measured physical properties or chemical properties so could have originated from the same source. This sample type is commonly encountered in our environment and may have limited associative value.
- **Limited Support (Type V Association)**- An association in which some minor variation exists between the known and questioned items that could be due to factors such as sample heterogeneity, contamination of the sample(s), or the quality of the sample. The items may be associated, but other sources exist with the same level of association.
- **Inconclusive** - No conclusion can be reached regarding the association between the items.
- **Elimination** - The items are dissimilar in physical properties or chemical composition and did not originate from the same source.

# Hypothetical

- Approximately 80% cotton and 20% polyester.



- Microscopy (optical properties, fluorescence, thickness, cross-sectional shape, and color)
- FTIR (chemical composition)
- Microspectrometry (instrumental color comparison)



# Conclusions

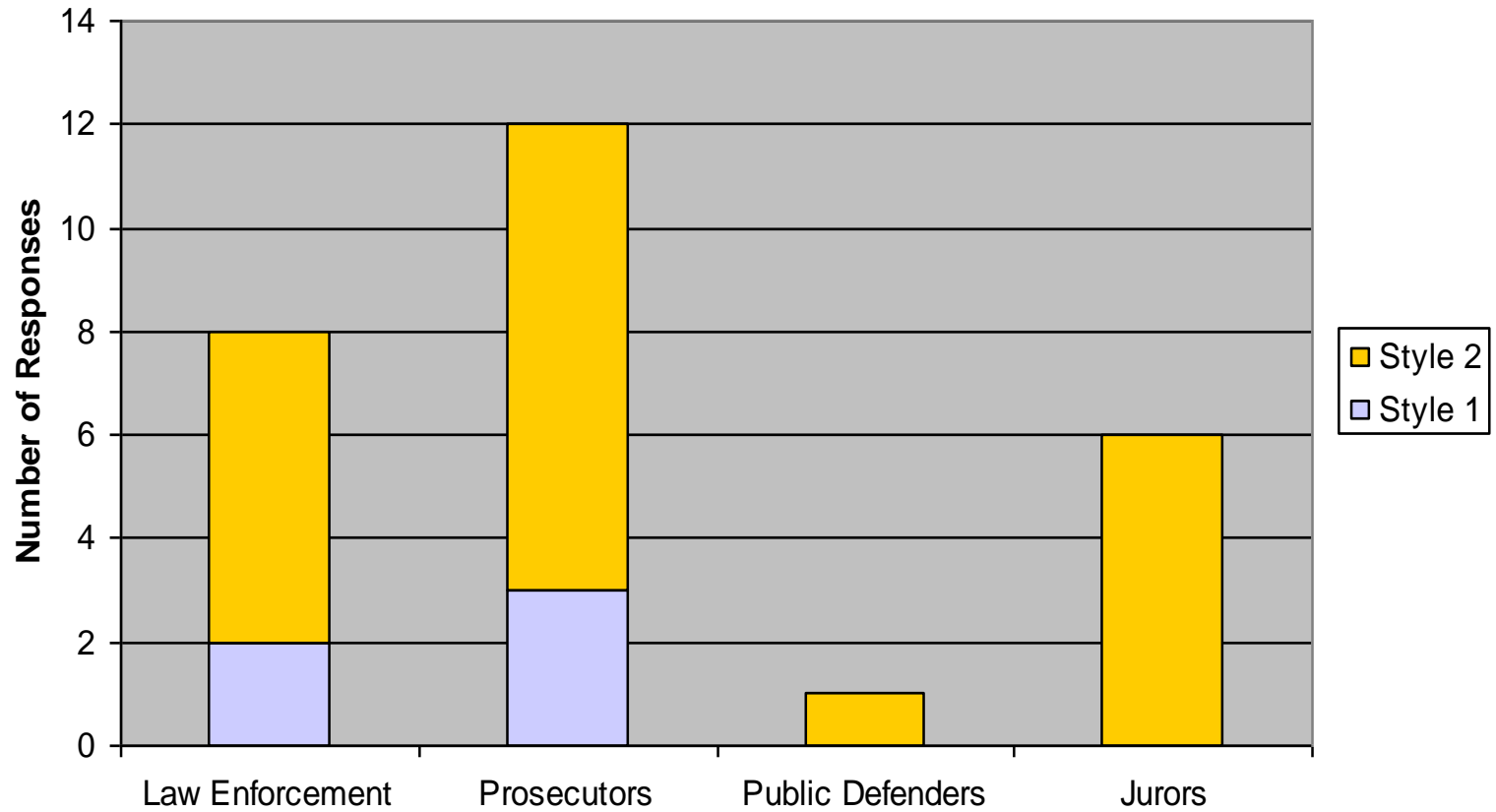
- Style 1

The fibers from the nail originated either from the green sweatshirt worn by the suspect or from another source of similar green polyester/cotton fabric.

- Style 2

The following similarities provide moderately strong support that the fibers on the nail originated from the green sweatshirt: optical properties, fluorescence, thickness, cross-sectional shape, chemical composition, blend composition, and color.

## Report Writing Feedback





# Law Enforcement

- Eight responses (25%) – six (75%) preferred style 2.
- “easier to digest and understand.”



# Law Enforcement – Continued



- “...style 1 is easier to use to draw other connections in the case... **easier for a Jury to ... form their own conclusions** based on the evidence and the scientist’s testimony.  
  
...style 2 has a **great degree of subjectivity** to the conclusion.”

# Prosecutors

- Twelve responses (44%) – nine (75%) preferred style 2.



# And now it gets interesting...

- HOWEVER, of the five “Major Crimes” prosecutors that responded, **three strongly preferred style 1.**
- VERY interesting feedback – not expected...

# Prosecutor – Style 1



- “Style #2 gives the defense way too much room for argument that will just confuse the jury --> ... "moderately strong support" *only* falls in the middle of the Conclusion Scale. All of those categories above "moderately strong support" offer the defense almost countless ways to disqualify the evidence ...”

# Prosecutor – Style 1



- “... we deal with only one relevant standard: **beyond a reasonable doubt [BRD]**. To use other language when the lab analyst offers her level of conviction for her conclusion on a particular item of evidence is at minimum confusing and at maximum undermining of the standard the prosecutor is trying to reach.”



# Prosecutor – Style 1



- “... moderately strong support is not proof BRD. We will argue corroboration but the wording trying to quantify weakens the appeal of our case.”

# Public Defenders

- One response (2%) – preferred style two.
- “... provides more detailed information without the conclusory [*sic*] language, which invades the province of the jury.”



# Jury Pool

- Six responses (32%) – six preferred style two.
- “... the Conclusion Scale (Style 2) ... adds a **nearly essential component to the interpretation** for the jury member. ...allows the juror a much greater grasp of the importance of the information and how it relates to other information presented in a case.”



# Summary

- Although the majority of our clients preferred style 2, a persistent comment was that the “could have originated from” wording was easier to understand.

# Post-Survey Discussions

- Since the reported objective is to determine if the fibers on the nail **could have originated from** the sweatshirt - include this wording in the conclusion.
- “The following similarities provide **moderately strong support** that the fibers on the nail **could have originated from** the green sweatshirt...”

# Your Feedback

- Questions?
- Your comments are welcomed.
- [Helen.griffin@ventura.org](mailto:Helen.griffin@ventura.org)