

Identification and Clarification of Inaccuracies in the National Academy of Sciences (NAS) Report

Italicized statements were taken directly from the NAS report (prepublication copy pages 5-14 through 5-18). Scientific Working Group on Shoeprint and Tire Tread Evidence (SWGTTREAD) comments follow each statement.

"Identifications are largely subjective and are based on the examiner's experience and on the number of individual, identifying characteristics in common with a known standard."

SWGTTREAD Comments: Conclusions are based on objective and verifiable features which can be clearly explained and demonstrated to the judge and jury by an expert in this discipline.

"But there is no defined threshold that must be surpassed, nor are there any studies that associate the number of matching characteristics with the probability that the impressions were made by a common source."

SWGTTREAD Comments: Studies have been conducted regarding the quantitative and statistical aspect of individual characteristics used for identification. Due to the nature of this evidence and the variability in the qualitative aspect of features involved, definition of a threshold for identification would be artificial, arbitrary and lack sufficient credible basis.

"The group's recommended course of study has 13 segments, and each segment includes a suggested reading list and practical and/or written exercises. The student must pass an examination. This course of study does not require an understanding of the scientific basis of the examinations, and it does not recommend the use of a scientific method. Also, there is no provision or recommendation for proficiency testing or continuing education."

SWGTTREAD Comments: The referenced course of study was designed to specifically address the steps to be taken to train an examiner to competence in this area of evidence. This training guide includes extensive study of the scientific basis for the examination. Continuing education and/or proficiency testing are outside the scope of a training guide and are required through accreditation and certification and recommended in the SWGTTREAD guides.

"For footwear evidence, Fawcett⁵² and Bodziak⁵³ have attempted to assign probabilistic or statistical significance to impression comparisons."

SWGTTREAD Comments: This is a misrepresentation of the entire context of what is written in the book by Bodziak on page 344 of his book *Footwear Impression Evidence 2nd edition* where he states "Statistics are used here only to generate an appreciation of the importance and significance of random

characteristics and are not intended to represent actual statistics or circumstances that might surround a specific case.” Fawcett (page 237) qualifies his use of statistics in the same manner as Bodziak.

“In a European survey, examiners were given identical mock cases. Accidental, identifying characteristics were purposely put onto the sole of new shoes, and examiners were asked to make a statement concerning the strength of matches. The results of the survey concluded that there were considerable differences in the conclusions reached by different laboratories examining identical cases.”

SWGTHREAD Comments: There were primarily differences in the choices of wording used to express conclusions in this study. This was a survey focused on the expression of conclusions and based on fixed criteria. The survey was not representative of a normal comparison process and was not intended to validate the comparison process. There were many countries involved in this study and the differences in language, translations and individual laboratory wording criteria could easily account for the variations in the wording of some of the conclusions. No examiner identified an impression that another examiner eliminated.

“At the least, class characteristics can be identified, and with sufficiently distinctive patterns of wear, one might hope for specific individualization.”

SWGTHREAD Comments: Patterns of wear are not used for individualization.

“But neither IAI nor SWGTREAD addresses the issue of what critical research should be done or by whom, critical questions that should be addressed include the persistence of individual characteristics, the rarity of certain characteristic types, and the appropriate statistical standards to apply to the significance of individual characteristics.”

SWGTHREAD Comments: We have invited researchers to our meetings to discuss research ideas. In addition, we have also invited the National Institute of Justice to meet with us. Our science and research committee has created a list of research topics which will be posted on the SWGTREAD website. We have experienced no initiative on the part of the academic research community to reach out to our group for input. In March of 2007 we submitted a document that was titled “Input to the National Academy of Science” that specified needs of the Forensic Footwear and Tire Track community. A copy of that document is attached.

