



# 5 Questions



The recent National Academy of Science report mentioned bias as a contributing factor in examiner error. We wanted to find out how examiners feel about this so we sat down with Indiana IAI member and author, **Michele Triplett** of King County Sheriff's Dept. in Seattle, WA and asked her five questions;

## 1. What can examiners do to diminish bias?

I've heard people say that when we make identifications the process is objective and the conclusion is subjective. I've always taken this to mean that the analysis phase of collecting information and the comparison phase of looking for consistency and differences between two images are objective and the evaluation phase is subjective (i.e. determining whether a sufficient amount of agreement is present). This is easy to say, but is it true? I've often heard examiners say that they can see things that others with less experience may not be able to see. This may be true but it should be recognized that these types of characteristics are subjectively based (dependent on the subject doing the comparison) and not objectively based (clearly an element of the object) which is the latent print. If examiners are using these types of characteristics in arriving at an identification then it would seem that the process isn't as objective as some may claim.

One way to diminish bias is to understand the difference between objective information and subjective information and to use as much objective information as possible. Examiners need to be aware of how much of the information used to arrive at a conclusion is subjective and how much information is objective.

As an example, there are some examiners who agree with the SCRO identification to Shirley McKie (a case which has been debated for over ten years). One of the examiners that agrees with the identification has publically shown 16 characteristics in agreement from the core area of the latent print and over 30 characteristics in agreement from the total comparison. Numbers alone may influence some people but it's more important to understand the weight given to these characteristics. If these characteristics are objective in nature (clearly observable to others) then they'd be given more weight than the subjective characteristics (those that only certain subjects can see). It seems to me that the majority of characteristics being used to arrive at an identification in this case are subjectively based and therefore shouldn't be given a great deal of influence. Subjective information is considered to be at a higher risk of being biasing information and should be refrained from being used.

## 2. Are there any elements of the ACE-V process that help diminish bias?

Yes, there are elements within each phase of the ACE-V process that help to diminish bias.

One of the first elements is in the analysis phase. As mentioned previously, it's important to collect data that is objective in nature. Subjective data can also be collected and used but it should be recognized as being subjective so we don't allow this type of information to bias us.

During the comparison phase it's important not to try to make something fit our initial conclusion, instead examiners need to try to prove themselves wrong. Karl Popper, a well-known scientist, calls this the process of falsification. This has been recognized as a valuable part of arriving at scientific conclusions since the mid 1900's. The idea behind this is that if we try to make something match something else, our biases will certainly help us do this, even when two items really aren't the same. In order to diminish bias it's important not to try to make something match but try to look for things that don't match. If we can't find any items that don't match then the only alternative is that the images must be consistent.

When arriving at the final conclusion, the evaluation phase of ACE-V, it's important not to ignore or make excuses for any information that doesn't fit our conclusion. Characteristics in a latent print that differ from the known print need to be seriously considered and not easily discarded as unimportant. One of the problems with the 2004 FBI erroneous identification of Brandon Mayfield was that there were differences between the known print and the latent print but they were discounted as being from a separate impression. The problem with this idea was that there were no visual signs supporting the idea of multiple impressions. It could be said that the examiners' biases made them think that certain requirements were no longer necessary.

At the end of the ACE process is the Verification phase. During the verification stage we try to diminish biases from being introduced by scrutinizing the original examiners' work instead of trying to confirm that the conclusion was correct.

These 4 elements each protect against bias from creeping into our conclusions. The better we understand these elements the better we can use them in the appropriate way. It's important to recognize that these elements are all standard requirements that must be adhered to under any scientific method.

### **3. Should agencies do anything additional to account for bias?**

Yes, when people's liberties are at risk we should never be too trusting of any person or any method. Agencies should provide appropriate training and testing of correct understanding. Jon Byrd and Dean Bertram provide the type of training needed to understand when and how bias affects our conclusions. Financial constraints aren't an appropriate reason for not providing adequate training. Agencies should also implement some type of review process or random audits to insure that examiners are not giving conclusions that are outside of what would be considered acceptable. Additionally they should promote good practices by implementing standardized procedures. These procedures could include documentation or blind verification when needed.

### **4. Would you agree that we, as examiners, may see the same characteristics, but based on our experience and training, we have a different comfort level as to what we need in order to identify a print? Perhaps we're not so much disputing minutiae (objective details), rather we are disputing the amount of distortion (subjective) in the print?**

Yes, I agree. The data used to arrive at a conclusion should be as objective as possible and the amount needed to establish sufficiency is a subjective element of ACE-V. Even though it's subjective that doesn't mean that examiners just determine this based on their training and experience. Examiners also need to understand what is scientifically required in arriving at a conclusion. Science requires more than the practitioner's opinion, science requires that the conclusions be those that are testable. For example, there may be enough information between the images to establish consistency but scientific conclusions also need enough additional information to test the hypothesis (the plausible conclusion). There are several ways to test a hypothesis. As stated previously, trying to falsify a tentative conclusion is one way to test a hypothesis. Another way to test a hypothesis is the use of predictive qualities. Pat Wertheim is best known for describing this. Pat describes it as looking for additional characteristics that go beyond looking for consistency; you need to be able to predict that additional characteristics will be in the other image. Sometimes we have consistency but not enough additional information to go beyond a plausible conclusion to a tested conclusion. There are additional ways to test a hypothesis as well but I won't go into those since this discussion is mainly about bias. There are also other scientific requirements for a conclusion that go beyond testing. Probably one (or two) of the most important criteria is that conclusions need to be open for reviews and they need to stand up to scrutiny. Training and experience are important in helping us arrive at a conclusion and they're also needed to know if a conclusion will stand up to scientific requirements and stand up to the scrutiny of others.

### **5. We love our music here in Indiana. Living in Seattle, the home of grunge music, we would like to know, in a battle of the bands who wins, Pearl Jam, Sound Garden, or Hammerbox?**

Sound Garden by far! But I really like Nirvana best.