

**ARE WE FOLLOWING THE
SAME PATH THAT GOT US IN
TROUBLE?**

Michele Triplett 2023

STANDARDIZATION (FRICTION RIDGE)

- 1995 TWGFAST (Technical WG)
- 1999 SWGFAST (Scientific WG)
- 2009 NAS Report: Need for cultural change
 - “...some of these activities ... are not informed by scientific knowledge, or are **not developed within the culture of science**”

2009 NAS REPORT

- “This new entity must be an independent federal agency established to address the needs of the forensic **science** community, and it must meet the following minimum criteria: • It must have a culture that is **strongly rooted in science**”
- 2013 Funding given to NIST / FSSB / OSAC

- 2015/2016 Academy Standards Board approved as an official SDO (Standards Development Organization)

EXPECTATIONS

- Improve Consistency and Transparent
- A Quality product you can trust
- Cultural change, from blind acceptance to **VALIDATED CONCEPTS**
- OSAC standards would be validated before getting on the registry

IS THAT THE RESULT?

OSAC 2.0 (2020)

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- Mission changed:
- Streamline the process
- Validation changed to Consensus
 - Documents clearly state, per FSP policy, operational decisions, not scientific
 - Agencies need to validate

QUESTIONS

- Does this increase consistency?
- Does this increase reliability?
- Does this improve quality?
- Or is it the same as before, **not developed within the culture of science?**
 - Conclusions are absolute and conclusive
 - Zero error rate

ORGANIZATION OF **SCIENTIFIC** AREA COMMITTEES

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- Is the title accurate or transparent?
- Does the culture of the FR Community understand the value of science conclusions?
- Or is the word simply being used to gain credibility?

PSEUDO-SCIENCE

- Fake - science

MARKETING

- Giving Certificates to early adopters

- Scientific concepts are accepted after questions are rectified.

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- **NOT ACCEPTED THROUGH MARKETING**

PUBLIC COMMENTS

- Are comments seriously considered and rectified?

- “A lot of people worked really hard on these documents, no point in wasting time rehashing discussions”
- **Dismissive Avoidance**, not the scientific culture.

EXAMPLE (ARE COMMENTS SERIOUSLY CONSIDERED?)

- ASB document on Proficiency Testing currently out for public comment.

3 Terms and Definitions

NOTE The assigned value provides the basis for which participant results are expected to conform and performance is evaluated

3.1

competent friction ridge examiner

An individual who has successfully completed their FSP's training program and has demonstrated to the FSP that they possess the knowledge, skills, and abilities to perform the tasks required of their current position.

3.2

consultation

A significant interaction, prior to the initiation of verification or technical review process, between qualified FSP personnel regarding one or more impressions in question.

NOTE An interaction is considered "significant" when it involves a partial or complete examination of the impression(s) in question.

- Comments **seriously considered** or approval of documents **rubber stamped?**

EXAMPLE 2 (ARE COMMENTS SERIOUSLY CONSIDERED?)

- ASB BP for Verification
 - Public Comments only open to revised portions
 - OSAC request for modification is being considered

Is this **equal consideration** or heavily swayed to **promote OSAC?**

QUALITY

- Are these the practices of a group striving for **Improvement, Quality, or a Scientific Culture?**
- Or are these the actions of **promoting agendas?**

- “Nothing works all the time”
- “We can change it later; we need to get something published”
- “We don’t care about science; we are looking for consensus”
- “It is not a conflict of interest to review and approve your own work” (same people on OSAC as on the ASB)

SCIENTIFIC CULTURE

- Are we **questioning** ideas, or **blindly accepting** them?

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Shining a Light on Forensic Black-Box Studies

Kori Khan^{a,b} and Alicia L. Carriquiry^{a,b}

^aDepartment of Statistics, Iowa State University, Ames, IA; ^bCenter for Statistics and Applications in Forensic Evidence (CSAFE), Iowa State University, Ames, IA

ABSTRACT

Forensic science plays a critical role in the United States criminal legal system. For decades, many feature-based fields of forensic science, such as firearm and toolmark identification, developed outside the scientific community's purview. The results of these studies are widely relied on by judges nationwide. However, this reliance is misplaced. Black-box studies to date suffer from inappropriate sampling methods and high rates of missingness. Current black-box studies ignore both problems in arriving at the error rate estimates presented to courts. We explore the impact of each type of limitation using available data from black-box studies and court materials. We show that black-box studies rely on unrepresentative samples of examiners. Using a case study of a popular ballistics study, we find evidence that these nonrepresentative samples may commit fewer errors than the wider population from which they came. We also find evidence that the missingness in black-box studies is non-ignorable. Using data from a recent latent print study, we show that ignoring this missingness likely results in systematic underestimates of error rates. Finally, we offer concrete steps to overcome these limitations. Supplementary materials for this article are available online.

ARTICLE HISTORY

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KEYWORDS

Criminal justice;
Experimental design;
Forensic science;
Non-ignorable missingness;
Sampling bias

CONCLUSION

- Committee views are not always the views of the community
- Committee views are not always scientific views
- Committee views are not BP if practices are not compared to other practices to determine which is practice is BEST
- OSAC is not a Standard Development Organization (SDO)

- Are these new Standards/BP's improvements?
- Are they helping us or our customers?
- Are they rooted in science?
- Are those who are questioning the standards being heard?
- Or are the new Standards/BP's simply new dogma?

- Who are those making these standards?
- What are their qualifications in order to have a vote?
- Are they aware of the NAS views on “rooted in science”?
- Are they aware of scientific protocols?
- Do they understand the value of scientific protocols?
- What was their ‘yes’ vote based on? On the ASB, you have to state why you’re voting no, yet you need no reason for voting yes.

- In the eyes of many, the new standards/BP’s are **not living up to the expectation.**

- Don't blindly buy in and follow others (as with using "absolute and conclusive" "zero error rate")
- it will get you in the same trouble as it did before, repeating the past.
- Question, think; consider information on the merits of the information, not on the person or organization that is stating the view.

Don't be sheep following self-appointed shepards

- I'm not asking for you to follow me, I'm highlighting what happens when we don't critically analyze information.

QUOTES THAT MAY APPLY

- Those who are unaware of the past are condemned to repeat it. - George Santayana.
- Very few people had the expertise and the information required to know what was actually going on statistically, and most of the people who did lacked the integrity to speak up.” - Cathy O’Neil