

## Response to: DR AS 5388.3 Forensic analysis – Part 3 – Interpretation

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We are acting in our personal capacities, and the opinions expressed herein do not necessarily represent the official policies of the organisations with which we are affiliated.

We begin by echoing the sentiments expressed by Dr Geoffrey Stewart Morrison (and signatories) in response to DR AS 5388.3. Specifically we agree that:

*“If the draft standards were adopted substantially as is, they would falsely legitimise current bad practice. This would be a major impediment to improving how forensic evidence is interpreted and reported in Australia. If bad practice were challenged in court or elsewhere, the offending party could claim that they are following the standards and thereby obtain an undeserved imprimatur, and perhaps avoid further scrutiny. See Lucena-Molina et al (2012) on the dangers of this already occurring in Spain because of legislative changes regarding the status of forensic reports. Ultimately, it would be better to have no published standards than to have bad published standards.*

*Rather than attempt to fix the current draft it would be more efficient to begin the process afresh inviting internationally acknowledged experts in the field of interpretation of forensic evidence to be involved in the drafting process from the very beginning, and paying particular attention to their advice.”*

We also support Dr Geoffrey Stewart Morrison (and signatories) suggestion that:

*“the draft standards appear to have essentially ignored the progress made in development of theory and practical implementation in the field of interpretation of forensic evidence over approximately the last twenty years, including in the interpretation of DNA evidence.”*

As a result we are concerned that this document poorly reflects the scholarship, attitudes and endeavours of a large number of practicing and academic scholars who take seriously the critique of the forensic sciences formulated by the National Research Council’s Committee

on Identifying the Needs of the Forensic Sciences Community in the report “*Strengthening Forensic Science in the United States: A Path Forward*”. Particularly that:

“...there is a critical need in most fields of forensic science to raise the standards for reporting and testifying about the results of investigations”  
(pg 184)

It is our opinion that rather than raise the standards for interpretation and reporting, the standards proposed in DR AS 5388.3 give only the *appearance* of establishing performance criteria. Specifically, the production of Standards suggests that individuals and laboratories will be held accountable for their compliance with those Standards. For that to be a practical possibility the Standards must provide sufficient detail in order that compliance can be *objectively verified*, and so that practices can be *reliably compared* to those specified in the Standard. A detailed inspection of the wording of DR AS 5388.3 shows the current formulation to be particularly ill-suited for this role.

As written, compliance with DR AS 5388.3 currently hinges on the interpretation of numerous un-/ill-defined terms. For example:

- **Adequately** as in:
  - “...capable of being **adequately** explained” at 5.3.
- **Affect** as in:
  - “...any contextual bias that may **affect** interpretation...” at 4.5.
- **Appropriate** as in:
  - “...use of **appropriate** non-parametric statistical descriptors...” at 5.2.
  - “**Appropriate** assessments of measurement uncertainty shall be used” at 5.2.
  - “...where **appropriate.**” at 6.1.
- **Aware** as in:
  - “Practitioners should be **aware** of such limitations...” at 4.4.
  - “The examiner shall be **aware** of any contextual bias” at 4.5.
- **Clear** as in:
  - “...should be expressed in **clear** and simple terms...” at 8.1.
  - “...should provide a **clear** indication...” at 8.2
- **Consider** as in:
  - “...the examiner shall **consider** the context information...” at 5.3.
  - “...blind reviews should also be **considered**” at 6.1.
- **Qualified** as in:
  - “...a second **qualified** examiner.” at 6.1.
- **Take steps** as in:
  - “and shall **take steps** to counter any such bias.” at 4.5.
  - “Forensic facilities should **take steps** to minimize the risk...” at 4.5.
- **Understandable** as in:
  - “...such as may be **understandable** to a non-expert person.” at 8.1.
- **Weight** as in:
  - “...the examiner shall apply a **weight** to the opinion.” at 8.1.
  - “...convert that ratio into a statement about the **weight** of the evidence.” at 8.2.

Yet, in order for individuals and facilities to be held to Standards incorporating the constructs above, they must be precisely defined. Without a precise definition, the extent to which a particular practice is compliant, if at all, can not be determined in any defensible manner.

Below we have raised a non-exhaustive list of questions we regard as requiring further consideration and resolution before the Standards can be practically enacted, defended, and adhered to:

- **Adequately.** When does something become adequate? How can that be observed or verified?
- **Appropriate.** What makes something appropriate? What is or is not appropriate in an instant case? Or type of situation? Who decides what is appropriate?
- **Aware.** How do you know if someone was aware of something? Is simply declaring knowledge sufficient? Does awareness entail a reflective process whereby the thing you are aware of impacts upon the task at hand? If so, how is that process and impact documented? How is the reliability and validity of that assessed, communicated and interrogated?
- **Clear.** How do you know when something is clear? What test will be used to establish that? Is clarity a binary (yes/no) characteristic or will certain levels of clarity be sufficient? If so, where will that level be set? Who will determine the level? On what basis will that determination be made?
- **Consider.** How do you know when something has been considered? When has something been considered enough? How do you know when something has been considered in a valid and reliable manner?
- **Qualified.** What level of qualification? What type of qualification? Who endorses or assesses that the qualification criterion has been met?
- **Take steps.** What might these steps be? How are they to be taken? How is this process of ‘taking steps’ documented and communicated so it can be interrogated by others and assessed for validity and reliability?
- **Understandable.** How do you know when something is or is not understandable? Is this a continuous dimension or is it a binary (yes/no) construct? How will you assess it?
- **Weight.** How shall that weight be applied? How is the weight to be calculated? How could someone interrogate the weighting procedure to assess whether it has been completed validly and reliably?

Unless the Standards are operationalized more precisely, it will not be possible to objectively and reliably assess if any practice is in compliance with the Standards. As a result the standards will become *unenforceable*.

Most concerning of all, in their present form, *the standards appear to be designed so that all forensic scientists can claim their work is compliant, without there being any need to substantially change their practices.*

Specifically, the Standards document provides a form of words that forensic scientists can use to indicate their compliance with the performance expectations (by simply stating: “I **considered** the context effects and **weighed** the evidence **appropriately** when reaching my opinion”) without the Standards requiring any objectively verifiable evidence that they have actually done so, or that they have done so in the manner or to the degree required.

Future drafts of the Interpretation Standard should define these and any other nebulous terms if there is any hope that individuals and facilities can be held accountable for their compliance.

## **Reference**

Lucena-Molina JJ, Pardo-Iranzo V, González-Rodríguez J (2012). “Weakening forensic science in Spain: From expert testimony to documentary evidence”. *Journal of Forensic Sciences*, 57, 952–963. doi:10.1111/j.1556-4029.2011.02041.x