

"Why the post-identification era is overdue", ASCLD

Lightning Talk (Oct 13 2022): summary and main points:

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Why the post-identification era is overdue

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ASCLD Forensic Research Committee 'Lightning Talk'

Episode on "The future of forensic analysis, interpretation and reporting"

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Starting point: Current ID practice is paradoxical because it persists, even though, never before in the history of forensic science (FS), have we had a better understanding of its limitations. 2/17

The way forward for the field of FS to secure its scientific foundations is by moving towards more defensible evaluation and reporting procedures that abstain from categorical source ID conclusions. 3/17

Academics and scientific publishers should support this move, rather than compromise it, as is often the case. 4/17

We have now come to a point where the amount of argument against standard ID-reporting practice is so overwhelmingly high that we cannot pretend to any scientific credentials if we continue to use standard ID conclusions. 5/17

Forensic science literature is a critical part of the problem: take any recent issue of the major FS journals and chances are good that you find at least one paper that makes unsuitable ID claims. 6/17

In order to foster trust in forensic science, journals should better examine what exactly ID-related research can and cannot justifiably purport to achieve. How to do that? 7/17

To the minimum, we should have a better understanding of the ways in which unsuitable ID claims manifest themselves in literature, so that we can more easily spot them in the future (and deal with them appropriately). 8/17

Here are three main categories of problematic papers (these categories are neither exhaustive nor mutually exclusive): descriptivism, diagnosticism and machinism. 9/17

Descriptivism: these are e.g. surveys that simply ask experts upfront the type of ID conclusions they would give; these studies are problematic because they start from the premise (and thereby suggest) that giving ID conclusions is the right/correct thing to do.
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Diagnosticism (1): these papers involve misguided diagnostic reasoning and confusing decision terminology (calling expert conclusions "decisions"): again, these papers assume that ID conclusions are a valid output. 11/17

Diagnosticism (2): some of these types of papers also do other things like using Bayes' rule to compute the posterior probabilities of source propositions, and then even confuse the result with the probability of guilt: this is simply incorrect on all levels of analysis. 12/17

Machinism: this category of papers uses off-the-shelf machine learning methods to try to "teach" a machine to make ID conclusions and "mimick" human ID practice in an essentially model-agnostic way. 13/17

What all of these types of papers have in common is that they tell us nothing about how to weigh, assign value to, observable features or measures of similarity on items of evidence in the first place. Instead, they reduce everything to the expert's utterance. 14/17

To make real progress in FS, we need to improve our understanding of how to assign and report the probative value of findings: i.e. the focus is on the value of the observations, not on examiners' direct opinions on propositions of common source ("ID opinions") ... 15/17

...because there is no scientifically defendable way to so. 16/17

We need more scientification of forensic practice, rather than what we widely see as the professionalization of forensic science. 17/17