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No One is Immune to Contextual Bias—Not Even Forensic Pathologists

Itiel E. Dror*
University College London (UCL), United Kingdom

Jeff Kukucka
Towson University, United States

Saul M. Kassin and Patricia A. Zapf
John Jay College of Criminal Justice, United States

Our suggestions to improve forensic decision making involve well-established and accepted scientific methodologies.

1. Our approach aims to ensure that forensic pathologists base their decisions on relevant medical data while remaining blind to eyewitness identifications, confessions, and other non-medical evidence (which they are not trained to evaluate). As such, our approach is similar to the use of double-blind line-up identifications, the use of placebo controls in medical testing, the assessment of inter-rater reliability in psychological testing, and other strategies commonly used in science to minimize bias. These are not "data hiding strategies" (Oliver, in press) but, rather, well-established and universally accepted practices in applied science.
2. For information that is task-relevant, our strategies provide for its presentation to experts, but in a sequence aimed to minimize bias (such as suspect/target driven bias). Linear sequential unmasking (LSU; see Dror et al., 2015) provides the data, while optimizing what information is given, in what sequence, and when. LSU is a context management tool designed to minimize bias by linearly unmasking all the relevant information in the right sequence.

Although Oliver (in press) attributes the current disagreement to our "model of the social role of the physician," our objections are purely scientific. Ideally, forensic pathologists should make determinations based on relevant medical information, the interpretation of which falls within their training and expertise. For example, whether a person died as a result of suicide should be examined by the forensic pathologist based on characteristics of the wounds themselves, rather than by assessing whether the suicide letter is genuine or faked.

Yet Oliver argues that the pathologist should also consider a virtually unlimited range of non-medical data. Our view is that the pathologist should not be exposed to or consider such non-medical types of information. Forensic pathologists are not in a position, nor is it their job, to evaluate the accuracy of an eyewitness account, the voluntariness and credibility of a confession, or other lines of evidence not within their expertise.

The forensic pathologist is not an all-purpose expert looking to solve crimes by emulating "Quincy, M.E." (or its newer successor "Silent Witness"). The medical examiner's job description should be to provide a circumscribed and independent judgment of relevant medical evidence. It is then up to investigators, prosecutors, judges, and juries to integrate that medical judgment with other lines of evidence.

In Oliver's (2017) study, experts were given second-hand, non-medical information (e.g., "The girlfriend was seen by neighbors running from the house with what appeared to be a knife," p. 1503). This type of information did increase consensus and confidence, but the questions that need to be answered are why it did so, what it means, and is it warranted and appropriate. On the basis of this result, Oliver (2018) claims that contextual information "improved diagnoses by approximately 20% and

Author Note
* Correspondence concerning this article should be addressed to Itiel E. Dror, University College London, United Kingdom. Contact: i.dror@ucl.ac.uk

significantly decreased error." Yet it is impossible to make this claim given, as Oliver (2017) himself conceded, that "it was not possible to independently determine the 'ground truth' of the diagnosis" (p. 1501). It is therefore bewildering that he now claims that his study showed "decreased error" (Oliver, 2018) when his own published paper correctly describes it as "a study of consensus of diagnosis rather than correctness" (Oliver, 2017, p. 1501).

Even if contextual information leads all examiners to reach the same conclusion, this does not mean that their conclusion is accurate. The increased consensus and confidence can be based on evidence that should not be used, such as an eyewitness account that is wholly incorrect, a false confession, or information that is later ruled inadmissible.

To be sure, there are instances in which experts may need to integrate different forms of evidence. In those cases, scientifically sound protocols—such as the case manager approach (Dror, 2014) or linear sequential unmasking (LSU; Dror et al., 2015)—can be used to manage contextual influences in ways that minimize the risk of bias and cross-contamination (see *bias cascade* and *bias snowball* effects; Dror, Morgan, Rando, & Nakhaeizadeh, 2017).

Everyone's objective should be to minimize bias – not deny its existence. The Kukucka, Kassin, Zapf, and Dror (2017) survey clearly reveals a bias blind spot within the forensic sciences. Oliver's response just further illustrates this precise phenomenon.

Oliver's comments (in press) also underscore the importance and the need for data and scientific research—not introspection. The assertion that in 32 years of practice, I can think of only one case where my diagnosis of cause of death was seriously challenged in court" does not prove otherwise. One cannot infer that an expert was correct or mistaken based on whether his or her opinion was challenged in court. This point is well illustrated by the fact that nearly half of all exoneration cases in the U.S. involved people wrongfully convicted in part because of forensic science errors presented in court, often without challenge (Garrett & Neufeld, 2009).

Cognitive biases have been demonstrated in all realms of human decision making, including by experts, which is why it is important to use double-blind procedures, LSU, case managers and other safeguards that protect against bias. No one is immune—not even forensic pathologists.

Author Contributions

All authors contributed.

Conflicts of Interest Statement

The authors declare no conflict of interest.

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