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LETTER TO THE EDITOR

Authors' Response to Gill et al Commentary on

See Original Dror et al Article [here](#)

See JFS Editor-in-Chief Preface [here](#)

See Gill et al Commentary on [here](#)

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Editor,

Thank you for inquiring about the participants in our study [1]. We are glad to provide clarifications. As the title of our paper states, our research examined "cognitive bias in forensic pathology *decisions*" (emphasis added). It was not necessarily limited to American Board of Pathology Board-certified forensic pathologists, but included others who have the authority to make manner of death determinations (i.e., medical examiners, coroners, forensic pathologists, or others). As we also stated early on in our paper: "in this paper we use [those titles] interchangeably."

Hence, when we say "133 forensic pathologists," these may include, for example, medical examiners, coroners, or others that are not American Board of Pathology board-certified forensic pathologists (and, indeed, we also refer to the participants interchangeably as "medical examiners" throughout the paper). We are happy to take this opportunity to clarify that not all of the 133 participants were necessarily American Board of Pathology Board-certified forensic pathologists.

To be clear, our study is not about forensic pathologists per se, but about forensic pathology *decisions*, and in particular, manner of death decisions, which are often made by a variety of people. The experimental dataset in the paper [1] follows up the death certificate data, which includes death certificates signed by various people who are authorized to determine manner of death, some of whom are forensic pathologists.

It is also important to note that:

- The majority of people on the NAME membership mailing list that was used to generate the mailing list for the experiment are forensic pathologists. As such, we agree with the sentiment of the statement made in the Letter-to-the-Editor that "Certainly *many* respondents were forensic pathologists but it is inconceivable that all were" (emphasis added). It is interesting that this criticism has been selectively applied to our paper while it equally applies to many other studies published in JFS and other journals that also used the NAME mailing list to obtain anonymized responses and also refer to their participants as "forensic pathologists" (even though some were clearly not).
- Furthermore, the subject line of the recruitment e-mail used for our study clearly states that the study is about a "Case Survey for MEs" and the body of the e-mail explained the nature of the survey, which made it clear that it was intended for people who make determinations related to cause and manner of death.
- The Letter-to-the-Editor spuriously argues that "a change of only 5 or 6 certifications in each group would likely negate any statistical significance." Yes, perhaps changing participants' responses may change the results, as it would for any dataset and study. But the Letter is not arguing that some responses should be *changed*; it is arguing that some responses—namely, those of non-forensic pathologists or/and those that are not Board-certified—should have not been included in the data and therefore should be *removed*. If we were to selectively remove the relative proportion of non-boarded forensic pathologists from the mailing list (17 of the 55 responses, over 30% of the data) specifically from the two cells that underpin the bias effect, thereby deleting approximately a third of the data to artificially weaken the results, this would still not change the biasing effect, which would remain statistically significant, $\chi^2(1) = 4.07, p < 0.05$. Hence, their argument is demonstrably incorrect.
- Over 90% of our participants were over age 35 (and 70% were over age 45), which clearly suggests that just a few, if any, were still trainees, and that most or all were experienced practitioners who had completed their training.
- Furthermore, this entire line of argumentation in the Letter is ill-informed and arises from a misunderstanding regarding expertise. It assumes, incorrectly, that experience, certifications, and/or expertise reduces or eliminates bias. This is the bias fallacy of "expert immunity" [2]. It has even been shown specifically in the forensic domain that experts and novices are equally susceptible to biases [3].
- The results of our study relate to manner of death determinations, regardless if it was a forensic pathologist (Board-certified or not) or someone else making the determination (and it is naïve and incorrect to believe that being Board-certified immunizes from bias, see above). The bias is so striking, that even if we assume that many were not even forensic pathologists, and remove much of the biased data, the results still show bias.
- The sample pool not being solely forensic pathologists actually makes our study *more* representative of the reality of those who decide manner of death in real cases.
- The Letter also ignores the death certificate data we present in our paper [1] from over 1,000 real cases, where manner of death



determinations were significantly different for White vs. Black children.

Although we used the NAME website to create a mailing list for our survey, we should also clarify that NAME did not endorse or approve the study.

Every domain, and especially an important domain like forensic pathology decisions, should always welcome feedback, criticisms, and data to know how well it is performing. Errors and bias are important to research and investigate, and no one is immune from them. When the professional organization that represents a scientific discipline speaks out against quality control measures, such as second autopsies, or refuses to collect data on potential problems (e.g., by denying access to researchers who want to collect data on bias), it prevents them from seeing their own potential weaknesses, discussing them, and deciding if and how to address them.

Our study surely has limitations, as do all research studies. As we acknowledge in the paper, every answer that it provides also raises new questions for further research. Given that it is the first study to investigate potential bias in forensic pathology decisions, it is unfortunate that it has elicited such negative (and often personal) responses from the forensic pathology leadership and community. As we repeatedly state in our paper, cognitive bias is not intentional, and is not synonymous with negligence, fraud, incompetence, or intentional discrimination (see also [4,5]). Rather, every expert domain is susceptible to cognitive bias, even in domains that are more objective than forensic pathology, such as analytical chemistry [2]. This creates an onus to understand and address the problem of bias rather than deny its existence.

Itiel E. Dror PhD¹
 Judy Melinek MD²
 Jonathan L. Arden MD³
 Jeff Kukucka PhD⁴
 Sarah Hawkins JD⁵
 Joye Carter MD, PhD⁶
 Daniel S. Atherton MD⁷

¹University College London, London, UK

Email: i.dror@ucl.ac.uk

²PathologyExpert Inc, San Francisco, CA, USA

³Arden Forensics, PC, McLean, VA, USA

⁴Department of Psychology, Towson University, Towson, MD, USA

⁵Clark County Public Defender's Office, Las Vegas, NV, USA

⁶Sheriff/Coroner Division at San Luis Obispo County-California, San Luis Obispo, CA, USA

⁷Department of Pathology, University of Alabama at Birmingham, Birmingham, AL, USA

ORCID

Itiel E. Dror <https://orcid.org/0000-0003-4866-209X>

Jeff Kukucka <https://orcid.org/0000-0002-2692-7803>

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