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JOURNAL OF FORENSIC SCIENCES

LETTER TO THE EDITOR

Peterson et al Response to Authors' Response

See Original Dror et al Article *here*
See JFS Editor-in-Chief Preface *here*
See Peterson et al Commentary on *here*
See Authors' Response to Peterson et al Commentary on *here*
See Authors' Response to Peterson et al Response *here*

Editor,

It is encouraging that the authors decided to read the medical literature on caretaker relationship and acknowledge that the medical community recognizes it as being medically relevant, even if they disagree with it. Unfortunately, the author's response is a case study in the problem Lewis Carroll described in his conversation between Alice and Humpty Dumpty in "Beyond the Looking Glass" [1]:

*"When I use a word,' Humpty Dumpty said in rather a scornful tone, 'it means just what I choose it to mean—neither more nor less."'The question is, said Alice, 'whether you can make words mean so many different things."'The question is, said Humpty Dumpty, 'which is to be master — that's all."*That is exactly the conversation we are having here.

The authors focus primarily on their motivations for constructing this fatally flawed study. They are wrong in their implication that good motives make up for a misleading study design. Our response will deal first with structure, then with motivation.

The author's response to the medical literature demonstrating that caretaker relationship is medically relevant is to ignore it and dismiss it with the excuse that medical literature is biased. Thus, medical literature and consensus are irrelevant in determining medical relevance. It appears only that the personal opinions of the authors are free of bias. Besides, it is not the "main issue at hand." Instead, we should just accept that their opinion of what is and is not "medically relevant" is normative. We disagree. The medical literature has a role in determining medical relevance.

The author's dismissal of the medical literature based on a phrase in one of the articles is disingenuous. The authors claim that we make a "misleading" statement about the results of a 1985 study that "preschoolers living with one natural and one stepparent were 40 times more likely to be abused." That is not a misleading claim about the results of that study. It is a quote. The authors of that article write [2]:

"Both abuse and police apprehension were least likely for children living with two natural parents. Preschoolers living with one natural and one stepparent were 40 times more likely to become child abuse cases than were like-aged children living with two natural parents. Whereas abuse risk was significantly higher for children living with a stepparent than for those with a single parent, the reverse was true of the risk of apprehension for criminal offenses."Furthermore, of course, the authors do not dispute the findings that directly compare grandparent versus nonbiological male caretaker, other than under the umbrella of dismissing medical research.

With respect to the issue of their insertion of the confounder of race, the authors claim that they had no intention of intimating racial bias by inserting race as a confounder. This is demonstrably untrue. For a reason they decline to explain, they labeled the nonbiological caretaker case the "Black" case and the grandmother case the "White" case instead of the "Nonbiological" model and "Biological" model. If the authors had no intention of making race an issue, why did they ignore the driving factor in labeling their cases, and instead use race?

However, it gets worse. They state in their article [3]:

The dataset of death certificates indicated that forensic pathologists were more likely to rule "homicide" rather than "accident" for deaths of Black children relative to White children. This may arise because the base-rate expectation creates an a priori cognitive bias to rule that Black children died as a result of homicide, which then perpetuates itself. ***Corroborating this explanation****, the experimental data with the 133 forensic pathologists exhibited biased decisions when given identical medical information but different irrelevant non-medical information about the race of the child and who was the caregiver who brought them to the hospital. (emphasis ours)*

So, the contrived addition of the race factor into the survey was done specifically so that the Black case would have more homicides and thus "corroborate" the racial implications of the superficial and unexamined Nevada data. Black and White, not "Biological" and "Nonbiological."

In Figure 2, the two classes are "White" and "Black," not "Biological" and "Nonbiological."

In Figure 3, the caption is "White bars are for White children with the grandmother as a caretaker; Black bars are for Black children with the mother's boyfriend as a caretaker. "Not "biological" and "nonbiological."

In discussing their results, the authors write:

"When considering the possibility of bias, it is important to consider its possible source. Cognitive bias can emerge from factors related to the particular case itself (see Figure 1, Category A)—for example, the ***race of the child*** *in a given case* ***activates implicit racial bias****... That is to say, the forensic pathologists may "learn" over time, regardless of accuracy,* ***that more Black children than White children die as a result of homicide****. As a result, the forensic pathologists develop an a priori expectation, high prior odds,* ***that a Black child*** *has died as a result of homicide rather than*

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*accident.... With time, the pathologists are thus exposed to more rulings that **Black children** die from homicide, which strengthens the base-rate bias and prompts even more "homicide" findings—thereby creating a bias that perpetuates itself, resulting in bias cascade and bias snowball effects."* (emphasis ours)

The authors cannot both claim that their confounding of race does not imply racial bias and then claim that it corroborates their claim of racial bias.

Most important they have not explained ***why*** they intentionally inserted race as a confounder. This is particularly egregious because they do not dispute that had they reversed the race in their example, it would show the opposite result that they claim—that respondents would have called "White" cases homicide more often.

Thus, race apparently was inserted in this misleading and contrived way for a purpose. That purpose is stated by the authors themselves—to "corroborate" their insinuation of racial bias. The author's compromise of the quality of their study achieved this insinuation, and any pretense otherwise ignores how studies are designed.

The third structural response regarding this study is their insistence on mischaracterizing manner determination. The authors ask several questions in their response, none of which are part of their study. Raising tangential questions at this point does not change this misrepresentation. It is telling that the authors simply refuse to acknowledge that public health statistics is the purpose of manner determination.

Manner of death was established at the turn of the 20th century explicitly for the purpose of public health statistics, not courtroom presentation. As one historical review of manner determination notes [4]:

By 1851, seven states had enacted death registration laws and a method was devised as an outgrowth of the Shattuck Report for the 1850 Federal Census to count deaths. However, registration worked well in only a few cities and two states (5). *By 1880, resolutions of the American Medical Association and efforts of the American Public Health Association, National Board of Health, and Superintendent of the Census resulted in a registration area concept that was supported by a resolution of Congress. [As an aside, it was about this same time that the first medical examiner systems emerged in Boston in 1870 and in Baltimore in 1890]. Prior to 1900, the United States lagged behind other Western countries in developing a centralized death registration system, but by 1900 had drafted a model vital statistics law that could lead to a centralized system of death registration.*

The authors should note the designers: American Medical Association, American Public Health Association, National Board of Health, and Superintendent of the Census. Not Judges. Not District Attorneys. Not detectives. Not Lawyers. Not Juries. Not cognitive scientists with political agendas.

When the American manner determination system was put in place, one British reviewer in 1907 wrote that it will "conquer difficulties and raise the vital statistics of America to a worthy place among civilized nations." [6] Vital Statistics. Not trial results.

The authors compound their misrepresentation of manner by the bold statement of faith that "*We do strongly dispute the assertion in the Letter that "the goal is consistency." We believe the goal is to get the right answer, the truth. Consistency should not be confused with correctness or truth.*" The authors refuse to recognize that ambiguity is not a function of incorrectly determining manner. It is a function of the **structure** of manner. There is a large literature on the development, history, structure, and practice manner of death determination that the authors ignore.

The National Association of Medical Examiners in their guidelines, considered authoritative by the majority of the profession, explicitly state [7]:

It must be realized that when differing opinions occur regarding manner-of-death classification, there is often no "right" or "wrong" answer or specific classification that is better than its alternatives. When promulgating guidelines, however, one of the available options needs to be selected as the one recommended for use. Thus, the recommendations herein are ones selected to foster a consistent approach amongst certifiers, not because the recommended approach is the "right" or the "better" one.

*The "arguments," principles, and foundations used to support certain recommendations in this Guide cannot be applied uniformly to every conceivable death scenario because issues sometimes vary with the manner of death being discussed. As a result, there will be obvious, apparent "inconsistencies" in the rationale discussed for making some of the recommendations in this Guide. This problem is unavoidable because of the nature of the subject at hand. Thus, in some cases, one simply must select an available manner-of- death classification as the preferred one for use in a given scenario while recognizing that the logic used to select that option may not be applicable or directly transferable to other situations (and, in fact, may seem inconsistent with the logic employed in other scenarios). In short, it is sometimes necessary to simply select an approach and use it for the purpose of consistency, recognizing that other approaches may be "just as good."*The structure and function of manner of death determination is irrelevant to the authors. The realities of its design are irrelevant to the authors. Only their opinion seems to matter.

Ambiguity in manner of death determination is well-demonstrated in suicidology literature. For instance, there is dispute about whether certain kinds of intentional self-killing represent "real" suicide because of the dissociation of intent (to kill oneself) and motivation (the destruction of the self). In some cases, one "intentionally" kills oneself, but the motivation is not self-destruction and may even be seen by the victim as an effort toward group survival. Examples include self-killing as sacrifice to save others, such as when Lawrence Oates walked out his tent into an Antarctic blizzard during the 1912 Terra Nova expedition in the hope of increasing the likelihood that his compatriots might survive, and hunger strikes as social protest. The decision to classify self-killing under duress as "Suicide" or "Homicide" is not an issue of "truth." It is an issue of cultural convention and values. The more modern example of "suicide by cop" is another case where intent of the act (shot by police) is disjoint from the motivation of the act (self-destruction by the

victim). The classification of "suicide by cop" as "Homicide" instead of "Suicide" is an issue of convention and consistency, not scientific objective "truth." There is no atomic standard at the National Institute of Standards and Technology that says that "Suicide by cop is Homicide." However, the authors insist that they have the key.

As to the "additional issues:"

The authors dispute that there is a mechanism for obtaining contact information from the National Association of Medical Examiners (NAME). Their claim is false. The authors noted that the primary author once "approached NAME…to conduct a simple survey…" and was denied. Once. It is not clear what the problems were with that proposed study, but the fact that the committee denied one application does not mean that it does not grant them. NAME provided contact information for 8 studies during the combined period of 2019 and 2020. The NAME committee has, in the past, supported studies on contextual issues, including but not limited to a series on the use of context in the interpretation of patterned injuries. To claim that because the committee denied one application on one study by one author means that the process does not exist and that is appropriate for a different author with a different study to bypass it is simply false.

The authors admit that in their study of so-called "forensic pathologists," the authors do not know how many are, in fact, forensic pathologists. This would have been a simple question to ask. The authors decline to say why they intentionally avoided asking the question, but just as it was an explicit decision to insert race as a confounding factor, it was an explicit design decision to decline to ask the few basic questions that would provide evidence for the repeated (and untrue) claim in the paper that the respondents were forensic pathologists and that they actually do manner certification. This is a fatal problem for this study.

Now, we will move to the authors' statements about motive.

The authors claim that none of the above matters. The "main issue at hand" is that aggregate statistics have no application in individual medical diagnosis. This is incorrect. Hiding behind labels like "ecological fallacy" is a smokescreen. The authors make a mistake in implying that all ecological inference is "ecological fallacy." It is not [8]. One of the problems with the "logical fallacy" name game is that it allows one to engage in name-calling without actually engaging. The authors, by attempting to dismiss concerns by this kind of labeling, are using this label as a "thought-terminating cliché," where the assertion of labels is used to dismiss an issue [9]. The authors ritual invocation of the label "ecological fallacy" here is not useful.

Were we to apply the author's assertions, medical diagnosis would be impossible. Not all gunshot wounds are fatal—even gunshot wounds to the heart and head. Thus, it would be the "ecological fallacy" to infer that a gunshot wound is fatal in a particular case. Not all people with high concentrations of dangerous drugs in their blood die. Thus, it is the "ecological fallacy" to infer that a person died of a drug overdose. All diagnoses are probabilistic, all diagnoses apply general statistics to individual cases, and all diagnoses work by making explicit or implicit assumptions about the absence of intervening factors.

More importantly, the authors conflate what they say. In one breath, they claim that inference from aggregate statistics is the "ecological fallacy," and in the next breath they note that they think it is not only good but necessary and that *"We do not dispute that police investigators, prosecutors, jurors or judges rely on such contextual information…"* Thus, the problem is not that people engage in ecological inference. The problem is that physicians who are trained at weighing this contextual information are permitted do it as part of medical diagnosis or manner classification. It is not **what** is being done, it is **who** is doing it.

James Luke in his discussion of forensic pathology almost 50 years ago put it well [5]:

The responsibility of a forensic pathologist is not simply to determine the cause of sudden death, but, more importantly, to understand the particular circumstances of what happened. The daily challenge of unraveling the vagaries of fate, of discerning the truth by providing reasoned answers to the questions posed in all such cases, and of anticipating well enough the ramifications of these interpretations, depends on one's experience and judgment to a degree not readily found in other fields of endeavor.

…To bring order from the chaos of violence, to separate fact from fancy, to provide impartiality to an adversary legal system, to search for the truth in terms of defining what happened to another human being, forces the forensic pathologist - uniquely – to examine death within the context of life, and the victim in terms of his community.

It is this role of the forensic pathologist that examines "death within the context of the life and the victim in terms of his community" that the authors dispute. The rest of these discussions are window dressing. In a different paper, the authors are more explicit [10]:

*"This raises a fundamental question about the appropriate role of the forensic expert. In our view, the forensic pathologist's role is to make decisions within his or her domain of expertise that are based solely on the medical-relevant data, not to integrate these data with other types of evidence. In the criminal and forensic context, the task of integrating multiple lines of evidence is appropriate for the detective, the District Attorney Office, the jury, and the judge—but not for the scientific expert."*The authors clearly do not believe their own words when they claim that this integration should not be done and represents the "ecological fallacy." They recognize that it is necessary, useful, and valid. What they believe is that forensic pathologists and epidemiologists, who are explicitly trained in evaluating this kind of information, should not do it when evaluating manner determination for public health statistics. Instead, lay jurors are more competent to integrate contextual and medical information and to decide what is and is not "relevant" in any particular medical situation than are physicians.

Next, the authors respond to the recognition that this study represents an abject failure of the peer review process by noting that they have published other papers. If they want to apply the "ecological fallacy" to everything, they should be consistent and apply it to their own work. Other papers, of whatever quality, are not this one, and having published a paper in the past is not an excuse for publishing this rank pseudoscience. Papers should stand on their own individual merits, and this one has none.

The authors claim that the publication of this article is justified because it will cause "discussion." There have been plenty of "discussion" about this topic. There have been plenary sessions at national forensic meetings, panel discussions, workshops, papers, committees, and discussions in other venues. The authors claim that they repeatedly push sequential linear unmasking so that it will be "considered" by the forensic pathology community and ignore that it has been "considered" multiple times in multiple venues and multiple publications, position papers, and formal responses—considered and rejected.

This is not about "discussion." This is about creating a narrative that there has been a scientific study that somehow validates the claims by the authors regarding racial bias. Already, the authors have published an editorial claiming that this study is a scientific validation of claims of bias [11].

So we are beyond the looking glass, peering at a paper that is not science but simply another effort to replace forensic science with the personal opinions, social agendas, and the pseudoscience of academicians on personal crusades who do not understand the realities of life and death on the street. This paper creates its own definition of "medically irrelevant" to mischaracterize a medically relevant issue. It disregards the medical literature by dismissing it as biased. It ignores the real structure of medical inference to impose a simpleminded model that is damaging to medicolegal death investigation. It inserts its own definition of manner of death in order to ignore the realities of its structure, function, and determination. It uses race as a confounder and then insinuates corroboration of racial bias. As one writer on evidence-based medicine noted, this article is characterized by "slapdash methodology, tendentious apologetics, and reckless disregard for consequences and the truth." [12] It is academically vacuous, intellectually dishonest, and intentionally deceptive.

The response by the authors confirms rather than diminishes that judgment. The Journal of Forensic Sciences must retract this false and intentionally misleading opinion piece.

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