

LETTER TO THE EDITOR

Commentary on: Dror IE, Melinek J, Arden JL, Kukucka J, Hawkins S, Carter J, et al. Cognitive bias in forensic pathology decisions. *J Forensic Sci.* <https://doi.org/10.1111/1556-4029.14697>. Epub 2021 Feb 20

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

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See Authors' Response to Young Commentary on [here](#)

Editor,

In their recent study, "Cognitive bias in forensic pathology decisions [1]," Dr. Itiel Dror and colleagues conclude that race biases medical examiners in manner of death decisions; however, one can draw a different conclusion from the data they present.

Consider the following:

- A total of 133 pathologists participated in a survey with one of two vignettes: one where the child victim was black and the mother's boyfriend was the caretaker ("Black condition"), and the other where the child victim was white and the child's grandmother was the caretaker ("White condition").
- Both vignettes had a 3.5-year-old discovered unresponsive. An autopsy disclosed a skull fracture, subarachnoid hemorrhage, and other bruises. There were no detailed eyewitness accounts of what happened to the child prior to the autopsy.
- Seventy-eight pathologists rightfully refused to determine the manner of death. There was not enough information to know what happened.
- Fifty-five of them were ruled either homicide or accident for manner. Rather than considering verbatim eyewitness accounts offered close in time to the events, they imagined the past events leading up to the autopsy instead.

Fifty-five of 133 pathologists demonstrate what has been called the Sherlock effect [2]: they "reason backward" like Sherlock Holmes from autopsy findings to the past events that supposedly led to the findings.

According to Sherlock Holmes in Sir Arthur Conan Doyle's first novel about the detective [3], "Most people, if you describe a train of events to them, will tell you what the result would be. They can put those events together in their minds, and argue from them that something will come to pass." Holmes called this "reasoning forwards" in the novel. "There are few people, however, who, if you told them a result, would be able to evolve from their own inner consciousness what the steps were which led up to that result. This power is what I mean when I talk of reasoning backward, or analytically."

Holmes claims that reasoning backward is not common; unfortunately, it is all too common among writers of detective fiction and practitioners of forensic pathology. Too many look at autopsy results and surmise "from their own inner consciousness" the complex past events leading to the autopsy results. Declaring either "homicide" or "accident" without knowing the complex past events as related by eyewitnesses is the Sherlock effect.

Backward reasoning Sherlock Holmes style is highly susceptible to bias. A bias is a preference. Writers of detective fiction, for example, might prefer a more exciting plotline to another less exciting one. There is nothing wrong with such preferences among novelists; however, in forensic science, forensic pathology, and the law, such preferences are disastrous. Inventing the past from one's own "inner consciousness" involves preferring one set of supposedly true past events over a vast number of possible sets of events that could also be true given the autopsy evidence.

That does not mean that the 55 doctors who backwardly reasoned are racist. Anyone could think that boyfriends—black or white—are more of a danger to small children than grandmothers. "Boyfriends are stronger than grandmothers," these pathologists could surmise, "so they can shake and slam small children harder."

But thinking that one can reason backward and get the right answer is both foolish and unjust. Many forensic pathologists and child abuse pediatricians have allowed many to be falsely accused and imprisoned, but none of these doctors want to admit it. It is worse to admit we have destroyed lives than to admit we might be racist.

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REFERENCES

1. Dror I, Melinek J, Arden J, Kukucka J, Hawkins S, Carter J, et al. Cognitive bias in forensic pathology decisions. *J Forensic Sci.* <https://doi.org/10.1111/1556-4029.14697>. Epub 2021 Feb 20.
2. Young TW. The Sherlock effect. How forensic doctors and investigators disastrously reason like the great detective. Boca Raton, FL: CRC Press, Taylor & Francis Group; 2018.
3. Doyle AC. A study in scarlet. London, UK: Ward Lock & Co; 1888.