

Op-Ed: Bite-Mark Evidence Proving Unreliable

Despite a robust industry of experts in the field, criticism of the forensic technique is growing.

Gabriel A. Fuentes, The National Law Journal

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July turned out to be a bad month for bite-mark evidence. First, a high-ranking Obama administration official told a government-sponsored conference on managing forensic science error that bite-mark evidence should be "eradicated from forensic science." Next, a Chicago federal judge issued perhaps the most stinging judicial rebuke yet of the unreliable and unsubstantiated notion that an "expert" can reliably associate a bite mark left in a crime victim's skin with a particular person.

The latest criticisms came on the heels of revelations in April by the FBI that 26 of 28 examiners in an elite FBI microscopic hair-comparison unit had overstated forensic matches in ways that favored prosecutors in 95 percent of trials in which they had offered evidence over two decades. It all served as a reminder of the need to rein in the runaway use of forensic "science" in our criminal courts.

Although the widely acclaimed 2009 report of the National Academy of Sciences highlighted the starkly limited reliability of many forensic disciplines commonly used to convict criminal defendants, many judges have been oddly reluctant to acknowledge that the NAS report changed anything. But change may yet occur as the limits of certain forensic sciences receive wider acknowledgement.

In a speech to open the July conference on managing forensic error sponsored by the National Institute of Science and Technology, Jo Handelsman, associate director for science in the White House Office of Science and Technology Policy, cited studies showing that the conclusions of bite-mark examiners were "all over the place," and said that such unreliable and unscientific methods "have to be eradicated from forensic science."



On July 24, as the National Institute of Science and Technology conference in Arlington, Virginia, was wrapping up, U.S. District Judge Gary Feinerman (left) released his memorandum opinion in *Starks v. City of Waukegan*, a civil rights action filed by an Illinois man who spent 20 years in prison for a rape before DNA exonerated him of that crime. Part of the earlier criminal trial evidence against Bennie Starks consisted of the opinion testimony of two dentists who told his jury that he was the source of bite marks left on the victim. Feinerman granted the dentists summary judgment in Starks' suit against them but did not mince words in finding bite-mark matching sorely lacking in reliability.

The judge began by citing the NAS report's conclusion that bite-mark identification was not supported by scientific studies, and that many of its underlying assumptions (such as the uniqueness

of human dentition) have not been scientifically established. The evidence that does exist, Feinerman wrote, "is damning."

The judge specifically cited two peer-reviewed articles by prominent bite-mark identification critics whose research the NAS had relied upon for its report. Interestingly enough, those critics included Mary and Peter Bush, a married couple who led a group of researchers at the State University of New York at Buffalo, whose criticism of the orthodoxy of bite-mark identification triggered a backlash from professional bite-mark examiners and even a prosecutor.

The critics of bite-mark evidence included Dr. C. Michael Bowers, a California dentist who was the target of an unsuccessful campaign to expel him from the American Academy of Forensic Sciences based on trumped-up ethics charges. Feinerman's citation to the Bushes and Bowers represented not only vindication for them, but also a step forward, in that their research may have begun to gain traction in the courtroom.

As for whether bite-mark examiners themselves may authoritatively address the reliability of bite-mark evidence, Feinerman quoted Upton Sinclair: "It is difficult to get a man to understand something, when his salary depends on his not understanding it."

In concluding that the bite-mark examiners in the Starks case could not have deliberately falsified their testimony, the judge compared their opinions to those of astrologers or palm readers. It would not be deliberately false, the judge wrote, for an astrologer to say the defendant committed the crime because the planets were in a particular alignment, or for a palm reader to have "grossly deviated from professional standards by mistaking the heart line for the head line."

Let's just say that the judge's opinion was not exactly a ringing endorsement of bite-mark identification evidence.

Feinerman's opinion, and the comments of Handelsman before the National Institute of Science and Technology, underscore the need for judges and practitioners to tread carefully when a self-proclaimed forensic "scientist" or "expert" comes to court with an opinion associating trace evidence with a criminal suspect. Is this evidence reliable? Do these experts, whether or not they claim their opinions to be grounded in "science" or mere "experience," have a reliable or valid basis for their opinions?

If mainstream scientists and judges are beginning to take note of the courtroom limits of weak forensic disciplines such as bite-mark comparison, perhaps there is hope that more courts will take the NAS report seriously and bring the needed rigor to their tasks as gatekeepers of expert evidence, upon which lay juries rely so heavily.

Gabriel A. Fuentes, a partner at Jenner & Block, has litigated forensic science matters including the defense of Dr. C. Michael Bowers before the American Academy of Forensic Sciences. The opinions here are his own.

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