

**STATE OF MICHIGAN**  
**COURT OF APPEALS**

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PEOPLE OF THE STATE OF MICHIGAN,

Plaintiff-Appellee,

v

SIMON AMINGO WRIGHT,

Defendant-Appellant.

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UNPUBLISHED

April 23, 1999

No. 179564

Recorder's Court

LC No. 93-007400

ON REMAND

Before: White, P.J., and Smolenski and Lamb, JJ.

WHITE, P.J. (dissenting).

Dr. Warnick's testimony was the only admissible testimony<sup>1</sup> linking defendant to the crime. Defendant was convicted on the basis that only one person could have inflicted the bite marks found on the victim and defendant is that person. Analogizing to fingerprint evidence, it is as if police found fingerprints at a crime scene, ran them through a computer directory and found a match to defendant. Thus, the scientific reliability of this evidence is crucial. The majority concludes that the literature supports the scientific reliability of bite-mark identification evidence to the extent of establishing that the facts and data upon which Dr. Warnick relied were derived from recognized scientific knowledge. I do not agree that that determination can be made on this record even when the literature is considered, and would remand for a *Davis-Frye*<sup>2</sup> hearing.

Although experts in the field of odontology have noted that courts seem to be uniformly accepting bite-mark identification testimony, there is substantial disagreement regarding its scientific validity and the extent of its usefulness.<sup>3</sup> Regarding the issue of the statistical probability that defendant made the bite marks at issue, I cannot agree that the court's failure to hold a *Davis/Frye* hearing was harmless. The majority's conclusion of harmlessness is based on the 1984 Rawson article<sup>4</sup> relied on by Dr. Warnick. I do not agree that the literature adequately establishes the reliability of applying statistical probability to comparison of bite mark evidence with a specific person's dentition.

The purpose of the investigation reported in the Rawson article was to set forth probabilities in the context of establishing that human dentition is unique, a proposition that is different from the proposition that a bite mark left on a person's body,<sup>5</sup> that appears to match a person's dentition, yields an identification with the same degree of statistical accuracy as a comparison of dentition with bite

marks made under controlled circumstances in a wax bite card designed for uniform impression of incisal edges of the twelve anterior teeth.<sup>6</sup> The article concludes that the proposition that human dentition is unique has been established, and that the real concern is the determination of the match between the dentition and the impression or bruising of the skin.

In 1986, Rawson was the lead author of another article in the same publication. It began as follows:

Although bite mark comparison techniques have been described as being as valid as fingerprints there are some who have suggested a waiting period before their use, until standards have been described and scientifically validated. Hale suggested that bite mark evidence should be excluded from the courtroom because of the lack of scientific reliability, and because significant courtroom duels between respected dental experts have raised the possibility of the failure of bite mark evidence according to the Frye standard. The high degree of uniqueness of human dentition has been demonstrated by Keiser-Nielsen, Rawson, and Sognaes. Establishment of this fact has allowed forensic odontologists to concentrate on determining the match between a dentition and the impression or bruising left on skin or other materials. Today it can be safely stated that if the correlation is high between the features of a dentition and those of a bite mark then there can be an assurance that no other set of teeth could have caused the mark. The question faced today is whether the degree of correlation between teeth and teeth marks can be determined reliably.

Few experimental studies have been carried out to determine the reliability of comparison techniques of bite marks in food or skin. One study has demonstrated that the dentition which produced test bites in wax is easily recognized with a high degree of reliability by forensic dentists. However, experimental bite marks produced in pigskin demonstrate a much lower degree of reliability on the part of investigators in being able to determine the dentition causing the mark. Dinkle indicated that there is no generally accepted approach to the evaluation of bite marks, and Butler stressed the need of better systems for evaluation and classification of bite marks.

The article went on to report on a series of investigations designed to determine the reliability of the system for evaluation of bite marks in human skin that was proposed by the Guidelines Committee of the American Board of Forensic Odontology. The article concluded that:

The scoring system presented in this paper has demonstrated a method of evaluation that produced a high degree of reliability among observers. In addition, it demonstrated the ability to discriminate between different degrees of match. If the score is above a certain value then there is a high confidence level that there is a match that could not have been produced by any other set of dentition. Further, if the bite mark is compared or evaluated by a group of forensic dentists and there is a corresponding high degree of consistency, then there is an extremely high confidence level in the conclusion of identity. The authors agree with Ligthelm and de Wet that there is a greater strength in certainty if a positive identification is confirmed by more than one qualified dental forensic scientist.

The scoring guide evaluated here is the beginning of a truly scientific approach to bite mark analysis. It lends itself to computerization and modification as our understanding progresses. The availability of such a scoring system and the adoption of guidelines or standards places a new responsibility on the forensic scientist. It is essential that proper training be provided for all those who will use the system.

In 1988, however, the authors of the 1986 article wrote to the *Journal of Forensic Sciences*:

Dear Sir:

In the Oct. 1986 issue of the *Journal*, we published an article entitled "Reliability of the Scoring System of the American Board of Forensic Odontology for Human Bite Marks."

It was felt that this article would generate discussion and feedback relative to the Board's scoring guide. **Subsequent discussion and review have led the authors to the conclusion that much more work and consideration will be needed before a stable and accurate index is developed that can be widely applied.** The presence of voluminous 'statistics' in the article may have led eager readers to form conclusions that are unwarranted by the data at this time. We therefore urge all the professionals involved in forensic odontology to regard the summary and descriptive statistics in the referenced article as preliminary results only.

While the Board's published guidelines suggest use of the scoring system, **the authors' present recommendation is that all odontologists await the results of further research before relying on precise point counts in evidentiary proceedings.** This does not mean that the investigator should not use the scoring system or other method of analysis that he or she may find helpful. It does mean that the authors believe that further research is needed **regarding the quantification of bite mark evidence before precise point counts can be relied upon in court proceedings.** [Emphasis added.]

None of the more recent articles on forensic odontology before us indicate that bite-mark comparison evidence can be translated into statistical probabilities.

Because I conclude that the information provided does not clearly establish that the testimony either satisfied or failed to satisfy the *Davis-Frye* standards, I would remand for a *Davis-Frye* hearing.<sup>7</sup>

/s/ Helene N. White

<sup>1</sup> Defendant's brother made a statement to police implicating defendant. He denied making the statement at trial. In our initial opinion, we determined that the admission of this prior hearsay statement was error, but that the error was harmless in light of Dr. Warnick's testimony.

<sup>2</sup> *People v Davis*, 343 Mich 348; 72 NW2d 269 (1955), and *Frye v United States*, 54 US App DC 46; 293 F 1013 (1923), superseded by statute as stated in *Daubert v Merrrell Dow Pharmaceuticals, Inc*, 509 US 579, 587; 113 S Ct 2786; 125 L Ed 2d 469 (1993).

<sup>3</sup> See, e.g., *Bite Marks in Forensic Dentistry: A Review of Legal, Scientific Issues*, 126 J Am Dental Assoc (1995), in which it is noted that “[t]here is no conclusive demonstration of the distinctive nature of a single bite pattern. Most forensic odontologists assume that bite patterns are characteristic and original, but this is not scientifically documented.” The article further states:

Identifying human remains by dental characteristics is a well-established component of forensic science with a definite scientific basis. However, the whole arena of bite marks is a recent and still controversial part of this discipline.

Regarding the methodology of obtaining evidence from the victim, the article notes:

For bites on human skin, a potential bite injury must be recognized early, as the clarity and shape of the mark may change in a relatively short time in both living and dead victims. Bite marks appear most often as elliptical or round areas of contusion or abrasion, occasionally with associated indentations. There may be avulsion [a tearing away] of tissue, or even pieces of tissue bitten off. There may be considerable bruising and wounds that have penetrated the skin.

\* \* \*

#### PROBLEMS IN BITE MARK ANALYSIS

Although the accuracy of various dental impression materials is definitely established, there is considerable variability in the precision of the representation of marks on human skin or other objects. Not only is skin a poor medium for accurate impressions, but human tissues often contain curves and other irregularities that produce intrinsic distortion. Additionally, any stretching of the skin produces large amounts of distortion in the shape of the tooth marks and the size of the dental arches.

\* \* \*

The few controlled studies of the accuracy of comparisons by bite mark examiners reported a fairly high rate of inaccuracy. In one 1975 study, experienced examiners could match bites in wax to the corresponding dentitions with a high degree of accuracy (99 percent), but 24 percent of the time, they were unable to correctly match bite marks in skin (porcine) with the appropriate dentitions.

See also *The Past and Present Legal Weight of Bite Marks as Evidence*, 17(2) American J of Forensic Medicine and Pathology, 136-140 (1996):

Other basic questions have arisen as to whether bite marks are reliable in identifying assailants. Of particular interest is the case of Richard Milone. *People v Milone*, 43 Ill. App. 385, 356 N.E. 2d 1350 (1976) In 1974, while Milone was incarcerated for murder, a double murder was discovered in the same area as the Milone murder. As part of the investigation, a bite mark analysis was performed on a wound found on one of the victims. In comparing the bite mark from the double homicide victim to the murder for which Milone was convicted, an identical match was made. A suspect in the double homicide was located, and upon examination of the suspect's dentition, a close similarity was found between the bite marks on the double homicide victim, the bite marks on the Milone victim, and the suspect's teeth. The suspect then confessed to the Milone murder. Milone, however, stands convicted and is serving a lengthy prison sentence mainly due to bite mark evidence. . . .

In conclusion, although bite mark evidence has gained the acceptance of the legal community providing that certain scientific methods are adhered to, the process is one that needs to be constantly reviewed. In particular, the technique of bite mark analysis should be reevaluated to determine whether sufficient data has been gathered to substantiate its use in the judicial setting. Even though it is still somewhat of a fledgling discipline, its value to the judicial process warrants its continued presence in a controlled environment. Evaluations must be objective and evidence should be clear enough for the trier of fact, the jury, to comprehend the analysis. The techniques used in the analysis should have a clear scientific basis. Bite mark analysis seems to have greater success as a means of excluding suspects than as analysis that attempts to match a suspect with a wound. It is important that the dental and legal communities understand its limitations, now that the courts have accepted bite mark analysis as an established technique. It is up to the litigants, in our adversarial system, to impress upon the courts that the haziness surrounding bite mark analysis is real, so as to ensure that bite mark analysis does not result in improper verdicts. As professionals, dentists should be aware of the substantial weight given to bite mark evidence when a request is made for their expert opinion.

<sup>4</sup> Rawson et al., *Statistical Evidence For the Individuality of Human Dentition*, 29 J Forensic Sciences 245 (1984).

<sup>5</sup> I note that apart from problems of bite mark distortion in human skin addressed by experts in the field, in the instant case, it appears that the victim was pronounced dead on August 4, within twelve hours after death, that the autopsy was not performed until August 6, and that Dr. Warnick may not have examined the body until after the autopsy, during which the victim's chest area was handled. (Dr. Warnick testified that he examined the body before the autopsy; the pathologist testified that he performed the autopsy before Dr. Warnick's examination.)

<sup>6</sup> One might analogize to the difference between the scientific reliability of serological electrophoresis in analyzing blood samples and the technique's reliability when applied to dried blood stains. See *People v Young (After Remand)*, 425 Mich 470; 391 NW2d 270 (1986).

<sup>7</sup> Defendant, who is represented by the State Appellate Defender Office, should be permitted to hire his own expert at public expense.