

Grammar lesson

To the Editor:

I enjoyed very much Wayne Schiess's excellent Plain Language column, "Splitting Infinitives, Ending with Prepositions, and Beginning with *But*" (June 2015). I may, in the future, follow his modernist's advice and split an occasional infinitive or begin a sentence or two with *but*. But, as a traditionalist, I am loath to end a sentence in a preposition, notwithstanding the contrary opinion of Sir Winston Churchill: "This is nonsense up with which I will not put."

Edward J. Littlejohn
Sarasota, Florida

History lesson

To the Editor:

I enjoyed reading Edward Littlejohn's abridged article, "Slaves, Judge Woodward, and the Supreme Court of the Michigan Territory," in the July 2015 issue. I look forward to reading the full version in his forthcoming publication, *Black Before the Bar*.

The article revealed an interesting period in the development of Michigan legal history and one of which I have little knowledge.

Thank you for including a bit of Michigan legal history in the *Bar Journal*.

Michael J. Baughman
Jackson

Test pattern

To the Editor:

The article by Patrick Barone and Ted Vosk in the July 2015 *Michigan Bar Journal*, "Breath and Blood Tests in Intoxicated Driving Cases,"¹ opined that breath and blood

tests in such cases in Michigan fail to meet basic scientific and legal safeguards for admissibility. I would like to offer an opposing viewpoint.

The authors claimed, "Judges around the country, including in Michigan, have begun suppressing breath and blood tests for failure to report uncertainty."² The fact is that only a handful of cases have addressed this issue, and only one of these cases has been decided in favor of the defense: *People v Carson*,³ decided by Judge Thomas Boyd on January 8, 2014, in the 55th District Court for Ingham County.

In *Carson*, the defendant had been charged with operating a motor vehicle while intoxicated. A search warrant was obtained for blood, which was subsequently forwarded to the Michigan State Police Crime Laboratory for testing. Duplicate analyses yielded results of 0.101 and 0.103 grams of ethanol per 100 milliliters of blood. The defendant successfully challenged the testing procedures and the reliability of the results; the court ruled the two test results were inadmissible pursuant to Michigan Rules of Evidence 702.

The case of *People v Jabrocki*⁴ was also cited by the authors, including a lengthy quote from the trial judge's *original* bind-over opinion issued May 6, 2011. Initially, the court found that the blood test results of 0.30 g ethanol per 100ml of blood were not reliable because of a lack of uncertainty measurement, and refused to bind over the charge of an operating while intoxicated—third offense.⁵ What the article failed to mention, however, is that the case did not stop there. In a second opinion on the same issue, the court reversed itself and found there *was* probable cause to believe that the crime of operating while intoxicated—third offense was committed by the defendant operating with a blood alcohol content in excess of 0.08 g per 100 ml of blood; specifically 0.301 g per 100 ml of blood.⁶ In essence, the court was satisfied that the lab had constructed an uncertainty budget for use in blood alcohol analysis.⁷ The defendant then pled guilty as charged on November 8, 2011, and was sentenced on December 15, 2011.

Additionally, only one other case in Michigan has ruled on the measurement uncertainty issue.⁸ The court in that case decided

in favor of the people. In *People v Hill*,⁹ addressing this issue, the court held:

I find that MSP used reliable principles and methods, which satisfies MRE 702(2). To the extent that Defendant contests the validity of the above data, at trial Defendant may do so through cross-examination or competing expert testimony.¹⁰

On page 32 of the Barone/Vosk article, the authors note a district court case from the state of Washington in favor of the defendant. However, that decision was reversed by the circuit court in that county and later affirmed by the Washington Court of Appeals in a published opinion.¹¹ The Washington Court of Appeals noted, "The burden is on defendants, not the State, to present uncertainty challenging BrAC test results," a judicial opinion not shared by the authors.¹²

Finally, the article notes that the Michigan State Police have constructed uncertainty budgets for breath and blood, but nowhere states how they are deficient. The article contends that the MSP needs to "reveal the sources of uncertainty," but fails to mention that the police laboratory and breath alcohol program both have unequivocally already done so.

In *Jabrocki*, the sources of uncertainty were extensively discussed and are part of the case record.¹³ The laboratory uncertainty measurements for blood alcohol appear on the lab report itself, and those for drug levels are provided routinely. The methods by which those data are derived are available through the Freedom of Information Act and have been provided many times on request as well as testified to in numerous court proceedings.

An uncertainty budget for the Data-master DMT was submitted during a *Daubert* hearing in which the Kent County Prosecutor's Office successfully demonstrated that the instrument was scientifically reliable.¹⁴ A report containing all the details of measurements and derived calculations was submitted as evidence in that hearing and provided to the defense. The report remains available through FOIA and has been repeatedly provided on request.

Again, the article does not specifically identify why Michigan's blood and breath measurements fail to live up to scientific

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standards. It fails to mention that the MSP Toxicology Laboratory is accredited by the American Society of Crime Lab Directors Laboratory Accreditation Board and as such is compliant with ISO 17025, which is acknowledged on page 31 as the international standard for competence for performing scientifically valid measurements. Thus, if the laboratory is certified as compliant with ISO 17025 and ISO 17025 is the international standard for scientific measurements, there is no justification in the article for saying it does not meet those standards.

In conclusion, case practice around our state shows that the majority of courts accept breath and blood test results as reliable evidence in operating while intoxicated cases, and for prosecutors, these results continue to be a crucial tool in fighting drunk and drugged drivers.

Kenneth Stecker
Traffic Safety Resource Prosecutor
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of Michigan

ENDNOTES

1. Barone & Vosk, *Breath and Blood Tests in Intoxicated Driving Cases: Why they Currently Fail to Meet Basic Scientific and Legal Safeguards for Admissibility*, 94 Mich B J 30 (July 2015).
2. *Id.* at 31.
3. *People v Carson*, unpublished opinion of the 55th District Court, decided January 8, 2014 [No. 12-01408].
4. *People v Jabrocki*, unpublished opinion of the 79th District Court, decided May 6, 2011 [No. 08-5461-FD].
5. *Id.* at 12.
6. *People v Jabrocki*, unpublished opinion of the 79th District Court, decided September 30, 2011 [No. 08-5461-FD].
7. *Id.* at 5.
8. See *People v Hill*, unpublished opinion of the 5th District Court, decided December 21, 2012 [No. 2011-005304-SD-B].
9. *Hill*, unpub op.
10. *Id.* at 9.
11. *Washington v King Co Dist Court West Div*, 175 Wash App 630; 307 P3d 765 (2013).
12. *Id.* at 641.
13. See *Jabrocki*, unpub September 30, 2011, op at 2-4.
14. *People v Stanhardt*, unpublished opinion of the 63rd District Court, decided January 14, 2014 [No. D-130733-FD].

Response from Patrick Barone and Ted Vosk¹

Ken Stecker is correct in that a number of issues we would have liked to address were not included in our original article. This is

because of space constraints for publication in the *Michigan Bar Journal*. We appreciate the opportunity to address some of those issues now.

We begin with Stecker's final point concerning the MSP Toxicology Laboratory being accredited by the American Society of Crime Lab Directors Laboratory Accreditation Board (hereinafter ASCLD) to ISO 17025 standards. Laboratory accreditation does not provide blanket coverage for all activities engaged in by a lab; rather, it applies only to the specific activities actually accredited. Hence, when Stecker says the lab is accredited, he hasn't actually told us anything about whether the activities at issue in the article are covered by that accreditation.

Significantly, the toxicology lab is not accredited by the ASCLD for purposes of breath testing or any activities associated with it,² nor is the Michigan State Police (MSP) Breath Alcohol Program. In fact, to our knowledge, no independent body has certified that breath testing in Michigan is ISO 17025 compliant in any way. Accordingly, the lab's accreditation provides no support for Stecker's claim that forensic breath alcohol testing in Michigan complies with basic scientific requirements.

The story is, admittedly, different for blood alcohol testing, which is covered by the toxicology lab's accreditation. It is actual adherence to proper scientific standards that is essential, however—not the accreditation. The importance of the accreditation is that it serves as evidence of compliance with those standards. When actual non-compliance with or misunderstanding of the actual standards can be shown, the persuasiveness of accreditation must give way. As we'll discuss shortly, blood alcohol testing by the toxicology lab does, in fact, suffer from these shortcomings, which undermine the determination of uncertainty associated with test results.

The most significant omission from the Breath Alcohol Program uncertainty budget for breath test results is alluded to in our article: it is the measurand. The sources of uncertainty included in the MSP's uncertainty budget relate solely to instrument calibration and performance. Assuming this has been done correctly, it yields the uncertainty associated with measuring a reference solution. A breath test is not performed on a

stable reference solution, however, but on a human being—a dynamic biological system. If biological factors contribute significant uncertainty to a final result, then it must be added to the instrumental uncertainties already determined to yield a result's estimated uncertainty. Failure to do so underestimates a result's uncertainty and misleads decision makers into having greater confidence in the value provided by a result than the underlying science supports.

It is well accepted that biological factors are the greatest contributors to the uncertainty associated with breath test results. The leading researcher in the field has placed the contribution of biological factors at greater than 70 percent of the total uncertainty associated with a breath test result.³ Thus, without considering any other shortcomings, the Breath Alcohol Program's uncertainty budget is expected to ignore nearly three quarters of the uncertainty associated with the breath test results obtained in Michigan. In other words, the current budget drastically underreports the uncertainty associated with a citizen's breath test result. This, in turn, misleads judges and jurors into having greater confidence in the breath alcohol concentrations obtained than the science underlying those results supports.

As for the uncertainty associated with the toxicology lab's blood alcohol results, the first point of concern is the lab's lack of understanding of uncertainty. In its budget for determining the uncertainty associated with blood alcohol test results, the lab identifies the two types of uncertainty associated with a measurement, type A and type B, as being random and systematic in nature respectively. This is incorrect. The distinction between type A and B uncertainties has nothing to do with the nature of their source, but the manner in which they are determined. Type A refers to uncertainty determined by statistical sampling while type B refers to uncertainty determined by other means.⁴ Such a fundamental misunderstanding creates concerns about the manner in which the lab identifies and quantifies sources of uncertainty.

Just as significant, although the uncertainty budget for blood alcohol tests seems to account for the uncertainty associated with the traceability of results obtained, in practice, the MSP has had difficulty actually

establishing that traceability. This is critical because traceability and uncertainty are as two sides of the same coin—you can't have or know one without the other. The inability to establish traceability is fatal to any attempt at estimating a blood test result's uncertainty. The *Carson* court found that, in the context of MSP blood tests, "traceability is an added unknown uncertainty component. This added unknown questions the accuracy of the Lab's calculated uncertainty estimate...."⁵

The result of this is clear: neither blood nor breath testing can be said to be in compliance with the basic scientific requirements of ISO 17025, nor can either the toxicology lab or the Breath Alcohol Program be said to have developed a sound method or budget for determining uncertainty.

As for whether courts have begun to suppress breath and blood test results for failure to report uncertainty, we're comfortable with our original claim. In the wake of the National Academy of Science's report, which included the conclusion that forensic breath/blood tests must be reported with an estimate of their uncertainty, courts have begun to require exactly that.⁶ The process is slow, to be sure, but courts are, in their lumbering evolution, beginning to require that forensic breath and blood testing adhere to the basic requirements of good science.

The first to do so were several trial level courts in Washington state beginning in 2009. The genesis of these cases was the refusal of the state's toxicologist to permit a breath test result's uncertainty to be determined and provided to an accused upon request. Rather, what was provided was the uncertainty associated with the calibration of the particular instrument used, *without* the relevant biological contributions. As previously discussed, this misleads factfinders into having greater confidence in a breath test result than the underlying science supports. The trial courts, in accord with the National Academy of Sciences, found that under Washington Evidence Rule 702, breath and blood alcohol tests were inadmissible absent their uncertainty because they would be misleading and unhelpful to the factfinders relying on them.⁷

During the course of these proceedings, the state toxicologist reversed its policy and

not only began determining the total uncertainty for breath test results upon request, but began doing so for every breath test result obtained statewide, whether requested or not. Noting this, the Washington Court of Appeals overruled the trial court decisions, but not in the manner that Stecker implies.⁸ That is, the Court did not rule that breath test results could not be suppressed if unaccompanied by their uncertainty or if the uncertainty were not reliably determined. Rather, because Washington is a *Frye* (not *Daubert*) state, the Court found that the rules of evidence could not be applied in a blanket fashion supplanting *Frye*, but instead must be applied on a case-by-case basis. Under this ruling, a trial court may still suppress a breath test result under Rule 702 based on its uncertainty or lack thereof, but the determination must be made pursuant to a motion in the context of an individual case.⁹ In the wake of the Court's decision, no such suppressions have been required since the lab now provides the uncertainty associated with the results of all breath *and* blood alcohol tests statewide.

With respect to the Michigan cases, things are not entirely as Stecker implies either. In *Jabrocki*, the initial challenge was based on the fact that the lab refused to report the uncertainty associated with a blood test result. The court suppressed the blood test for that reason. In doing so, however, it permitted the state time to develop the necessary uncertainty budget (precisely as the defense argued was necessary). The state subsequently provided the new uncertainty budget to the court with a motion to reconsider. The court found that the newly developed budget was sufficient for purposes of determining probable cause, and bound the case over. In the *Carson* case that followed, the defense requested and obtained the information concerning the toxicology lab's blood alcohol uncertainty budget Stecker alludes to in his letter. With that information in hand, the defense challenged the soundness of the lab's uncertainty budget. The court found in favor of the defense and suppressed.

Unfortunately, the efforts of Michigan courts to ensure that scientific evidence complies with the basic requirements of science—like similar efforts of courts nationwide—are hampered by three factors.

The first is that our "judicial system is encumbered by...judges and lawyers who generally lack the scientific expertise necessary to comprehend and evaluate forensic evidence in an informed manner...."¹⁰ The second is that, despite the efforts of many diligent forensic scientists to bring their disciplines into conformance with the requirements of science, there are many others who, either out of ignorance or intent, continue to mislead and confuse the courts as to what those requirements are. Finally, again out of either ignorance or intent, many prosecutors nationwide vigorously oppose legitimate attempts to hold forensic science evidence to the standards of basic science.

We invite Mr. Stecker to join us in the fight to bring all forensic science up to the level and standards of science itself. By doing so, we facilitate the criminal justice system's efforts to better achieve just results and increase the public's confidence in its resolutions.

ENDNOTES

1. Thanks to Michael Nichols, who was counsel of record in the Michigan cases, for his assistance in their analysis.
2. See generally ASCLD, *Accredited Laboratory Index* <<http://www.ascl-d-lab.org/accredited-laboratory-index/>> (accessed August 16, 2015).
3. See generally, e.g., Gullberg, *Estimating the Measurement Uncertainty in Forensic Breath Alcohol Analysis*, 11 *Accred Qual Assur* 562 (2006).
4. See Joint Comm. for Guides in Metrology, *Evaluation of Measurement Data—Guide to the Expression of Uncertainty in Measurement* (2008), p 6, § 3.3.4.
5. *People v Carson*, unpublished opinion of the 55th District Court, decided January 8, 2014 (No. 12-01408).
6. National Research Council, *Strengthening Forensic Science in the United States: A Path Forward* (2009), pp 116–117.
7. See, e.g., *State v Fausto*, unpublished order of the King Co District Court in Washington, issued September 20, 2010 (No. C076949) (on file with authors).
8. See *Washington v King Co Dist Court West Div*, 175 Wash App 630; 307 P3d 765 (2013).
9. The most significant flaw in the Court's reasoning does not reside in its discussion of Rule 702, but its *Frye* analysis. There, it determined that "BrAC results without confidence intervals are generally accepted in the forensic toxicology community." *Id.* at 639. This distorts the *Frye* analysis, however, by artificially limiting the relevant scientific community subject to consideration. Vosk & Emery, *Forensic Metrology: Scientific Measurement and Inference for Lawyers, Judges, and Criminalists* (CRC/Taylor Francis 2014).
10. *Strengthening Forensic Science*, p 110.